Instructor: Dr. William Veal  
Office: Room 315, 86 Wentworth  
School of Education, Health, and Human Performance  
Contact Information: vealw@cofc.edu  
953-8045 (office)  
Please use email as a primary form of contact  
Course Meetings: Section -001, Tuesday 8:00-10:50 a.m.  
Course Location: ECTR 215  
Office Hours: Tuesdays 1:00-3:30 or by Appointment.  
Email me anytime to setup an appointment.

3.1 Course Prerequisites:

3.2 Teaching Philosophy and Narrative Description:  
This is an introductory course in teaching science at the 2-8 grade levels. In this course you will study  
the nature of science, inquiry methods of teaching, science and engineering processes, assessment, and  
lesson planning focused within the context of science. As a result, the organization, content, and  
delivery of this course will focus on scientific processes and inquiry-based instruction. The course will  
provide the candidate with learning experiences in which he/she is engaged in science learning and  
instruction. Focus will be on lesson plan development and performance-based instruction.

2.6 Instructional Objectives:  
The successful student will be able to:  
• Plan Science Activities  
• Understand Certain Scientific Content  
• Recognize Inquiry Teaching and Learning  
• Comprehend Content Pedagogy  
• Appreciate Learner Diversity  
It is not the intent of the instructor to make students teach in an inquiry fashion; rather this class will  
teach the components of inquiry teaching and constructivist learning using an inquiry approach. This  
approach works well with implementing performance-based standards. Ultimately each student must  
develop their own style of teaching.

Pre-requisites: Acceptance into the elementary or middle school program, or by the department  
chair.

2.6 Student Learning Outcomes:  
As a result of this course, students will be able to:  
• Develop a lesson plan using different formats and teaching methods  
• Analyze national and SC science standards for science content and intent  
• Reflect on science learning pedagogy and content  
• Critically evaluate an assessment unit in science at a particular grade level

2.7 Attendance Policies
Class attendance and punctuality are expected professional behaviors. A candidate may be dropped from a course for excessive absences. One absence for ANY reason will be allowed. Upon the third absence, a course participation grade will take into effect and reduce the candidate’s score by 5 points. Student will receive an email and it will be cc’d to department chair. Upon a fourth absence, the candidate will automatically be withdrawn from a course with the grade of WA/F. I will work with you, but it is your responsibility to contact me by phone or email ahead of time. All assignments are due on due date unless extenuating circumstances apply. The student is responsible for contacting the professor ahead of time, and arranging for any extensions or submissions of late work.

ABSENCES:
- Go to 67 George Street (white house next to Stern Center) to discuss absences and fill out the appropriate forms.
- Forms are online at: [http://www.cofc.edu/studentaffairs/general_info/absence](http://www.cofc.edu/studentaffairs/general_info/absence) and they also can be faxed to the office at 953-2290.
- You will need documentation for health, personal or emergency situations.

MAKE-UP EXAMINATIONS, PRESENTATIONS, AND QUIZZES:
If an examination or assignment (other than the final examination) was missed for a legitimate reason, as determined by the professor, the professor has the discretion to administer a make-up session or allow late work. It is the responsibility of the student to contact the professor within 48 hours and make arrangements for the make-up. This is to be done as soon as possible after the missed examination, presentation, or quiz. If accepted, late work or assignments will be reduced by a percentage determined by the professor.

FINAL EXAMS: The final exam for the course (which may be in the form of an examination, performance, or project) will only take place during the period scheduled for the final exam for the course. (Students who have more than two finals scheduled on the same day may arrange for an alternate time for one final exam through the Office of the Undergraduate Dean).

2.8 Grading Policy and Assignments
Late submissions of assignments are unacceptable under normal circumstances. Please do not attempt to submit any assignments after the due date. I will NOT accept any late work. If assignments are turned in late, it is the discretion of the professor to determine the amount of points to be taken off the final grade. If needed, the professor will provide ample feedback on any assignment if the assignment is emailed to him at least 3-4 days prior to due date. All assignments are required to be uploaded to a designated DropBox in OAKS.

Any written assignment submitted is considered a final product that will be graded on both what is written (clarity, depth, and insight) and how it is written (the form of the written work). Therefore, it is crucial to realize that correct grammar and spelling, proper punctuation, adherence to assignment guidelines, and neatness will affect your grade. As an educator, you will be expected to demonstrate competency not only in verbal but also in written communication with parents, administrators, and other educators. Please use the resources around you to proofread and to edit your work. Rubrics for all assignments are provided on OAKS to assist you.

3.12 Learning and Tutoring Resources: I encourage you to take advantage of the Writing Lab in the Center for Student Learning (Addlestone Library, first floor). Trained writing consultants can help with writing for all courses; they offer one-to-one consultations that address everything
from brainstorming and developing ideas to crafting strong sentences and documenting sources. 843.953.5635 or http://csl.cofc.edu/labs/writing-lab/.

3.4 Assignment Due Dates:
Due dates for course assignments, as well as scheduled quizzes and assignments, are listed in the course calendar or are announced in class. No LATE assignments will be accepted. If there is a problem with submitting the assignment on time, please contact the professor ahead of time to ask for an extension (only extenuating circumstances will be allowed). If assignments are turned in late, it is the discretion of the professor to determine the amount of points to be taken off the final grade. If needed, the professor will provide ample feedback on any assignment if the assignment is emailed to him at least 3-4 days prior to due date.

Grading Scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93-100</td>
</tr>
<tr>
<td>A-</td>
<td>91-92</td>
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<tr>
<td>B+</td>
<td>89-90</td>
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<tr>
<td>B</td>
<td>86-88</td>
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<tr>
<td>B-</td>
<td>84-85</td>
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<tr>
<td>C+</td>
<td>82-83</td>
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<tr>
<td>C</td>
<td>79-81</td>
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<tr>
<td>C-</td>
<td>77-78</td>
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<tr>
<td>D+</td>
<td>75-76</td>
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<tr>
<td>D</td>
<td>72-74</td>
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<tr>
<td>D-</td>
<td>70-71</td>
</tr>
<tr>
<td>F</td>
<td>0-69</td>
</tr>
</tbody>
</table>

2.9 Required and Optional Textbooks, Equipment, and Technology

Textbook:
There is no textbook required for this course, but there will be an online subscription to the NSTA Learning Center that everyone must purchase. This can be found in the Student Bookstore or bought online. More information will be given in class and in OAKS. Students must have signed up for this subscription by the second week of class. Most readings and articles will be found on the NSTA Learning Center website. All students will become members of the NSTA Learning Center. Activities, readings, and some assignments will be through the NSTA professional development website.

iPads – Students will need to have a handheld DEVICE or computer in-class to be used every day. Activities will be optimized for the iPad so TEDU recommends that students get and use an iPad. Other devices will work, but it will be the student's responsibility to determine how to create the same output from a device other than an iPad. Google Docs and Google drive will be used in class and can be accessed from tablets or computers. Apps that will need to be downloaded or purchased are Science 360, iMovie, a word processor, and a note taker. Activities and homework assignments using this type of technology will be done in groups so there is no requirement for this class, but it is strongly suggested that you bring your own device. Use this link to apply for an iPad scholarship:

http://ehhp.cofc.edu/student-resources/scholarships.php

OR

http://cofc.qualtrics.com/SE/?SID=SV_3sM3n0vH5YIyiH3

Technology:
Enrollment in this course requires you to utilize the following computer applications: PowerPoint, Excel, Internet/WWW, OAKS via Internet, e-mail, and Word Processing. These computer applications are available in the College of Charleston managed computer labs located in JC Long, the Library, and various other campus locations. If you do not have reliable access to
these applications you should plan to use the campus computer laboratories. (See iPad item above.)

2.10 ADA Accommodations for Students with Disabilities:
In compliance with the Americans Disabilities Act (ADA), all qualified students are entitled to “reasonable accommodations.” Any students requiring accommodations should contact the Center for Disability Services (953-1431) and provide me with documentation of needed accommodations within the first two weeks of the course or as soon as they find out about potential accommodations if determined mid semester.

Center for Student Learning: I encourage you to utilize the Center for Student Learning’s (CSL) academic support services for assistance in study strategies and course content. They offer tutoring, Supplemental Instruction, study skills appointments, and workshops. Students of all abilities have become more successful using these programs throughout their academic career and the services are available to you at no additional cost. For more information regarding these services please visit the CSL website at http://csl.cofc.edu or call (843)953-5635. The CSL, located on the first floor of the library, offers a wide variety of tutoring and other academic resources that support many courses offered at the College. Services include walk-in tutoring, by appointment tutoring, study strategies appointments, Peer Academic Coaching (PAC), and Supplemental Instruction (SI). All services are described and all lab schedules are posted on the CSL website http://csl.cofc.edu/.

2.11 Academic Integrity & Honor System:
Lying, cheating, attempted cheating, and plagiarism are violations of our Honor Code that, when identified, are investigated. Each incident will be examined to determine the degree of deception involved. Incidents where the instructor determines the student’s actions are related more to a misunderstanding will handled by the instructor. A written intervention designed to help prevent the student from repeating the error will be given to the student. The intervention, submitted by form and signed by both the instructor and the student, will be forwarded to the Dean of Students and placed in the student’s file.

Cases of suspected academic dishonesty will be reported directly by the instructor and/or others having knowledge of the incident to the Dean of Students. A student found responsible by the Honor Board for academic dishonesty will receive a XF in the course, indicating failure of the course due to academic dishonesty. This grade will appear on the student’s transcript for two years after which the student may petition for the X to be expunged. The student may also be placed on disciplinary probation, suspended (temporary removal) or expelled (permanent removal) from the College by the Honor Board.

Students should be aware that unauthorized collaboration--working together without permission-- is a form of cheating. Unless the instructor specifies that students can work together on an assignment, quiz and/or test, no collaboration during the completion of the assignment is permitted. Other forms of cheating include possessing or using an unauthorized study aid (which could include accessing information stored on a cell phone), copying from others’ exams, fabricating data, and giving unauthorized assistance.

Research conducted and/or papers written for other classes cannot be used in whole or in part for any assignment in this class without obtaining prior permission from the instructor.

Students can find the complete Honor Code and all related processes in the Student Handbook at http://www.cofc.edu/generaldocuments/handbook.pdf.
As EDEE is a dual program, in that we certify candidates for teacher certification, professors reserve the right to document violations that would impact student certification (e.g., attendance problems in field experiences, methods courses, and clinical practice, professionalism in schools, etc.).

2.12 Program-Specific Elements:

National and State Objectives

Association for Childhood Education International (old Standards until new ones adopted)

2c. Science—Candidates know, understand, and use fundamental concepts in the subject matter of science—including physical, life, and earth and space sciences—as well as concepts in science and technology, science in personal and social perspectives, the history and nature of science, the unifying concepts of science, and the inquiry processes scientists use in discovery of new knowledge to build a base for scientific and technological literacy.

Association for Middle Level Education (AMLE) Standards

PRINCIPLE A: THE LEARNER AND LEARNING

Standard 1: Young Adolescent Development:
Middle level teacher candidates understand, use, and reflect on the major concepts, principles, theories, and research related to young adolescent development and use that knowledge in their practice. They demonstrate their ability to apply this knowledge when making curricular decisions, planning and implementing instruction, participating in middle level programs and practices, and providing healthy and effective learning environments for all young adolescents.

Element a. Knowledge of Young Adolescent Development: Middle level teacher candidates demonstrate a comprehensive knowledge of young adolescent development. They use this understanding of the intellectual, physical, social, emotional, and moral characteristics, needs, and interests of young adolescents to create healthy, respectful, supportive, and challenging learning environments for all young adolescents, including those whose language and cultures are different from their own.

Element b. Knowledge of the Implications of Diversity on Young Adolescent Development: Middle level teacher candidates demonstrate their understanding of the implications of diversity on the development of young adolescents. They implement curriculum and instruction that is responsive to young adolescents’ local, national, and international histories, language/dialects, and individual identities (e.g., race, ethnicity, culture, age, appearance, ability, sexual orientation, socioeconomic status, family composition). They participate successfully in middle level practices that consider and celebrate the diversity of all young adolescents.

Element c. Implications of Young Adolescent Development for Middle Level Curriculum and Instruction. Middle level teacher candidates use their knowledge of young adolescent development when planning and implementing middle level curriculum and when selecting and using instructional strategies.

Element d. Implications of Young Adolescent Development for Middle Level Programs and Practices: Middle level teacher candidates apply their knowledge of young adolescent development when making decisions about their respective roles in creating and maintaining developmentally responsive learning environments. They demonstrate their ability to participate successfully in effective middle level school organizational practices such as interdisciplinary team organization and advisory programs.

PRINCIPLE C: INSTRUCTIONAL PRACTICE

Standard 4: Middle Level Instruction and Assessment
Middle level teacher candidates understand, use, and reflect on the major concepts, principles, theories, and research related to data-informed instruction and assessment. They employ a variety of developmentally appropriate instructional strategies, information literacy skills, and technologies to meet the learning needs of all young adolescents (e.g., race, ethnicity, culture, age, appearance, ability, sexual orientation, socioeconomic status, family composition).

Element a. Content Pedagogy: Middle level teacher candidates use their knowledge of instruction and assessment strategies that are especially effective in the subjects they teach.

Element b. Middle Level Instructional Strategies: Middle level teacher candidates employ a wide variety of effective teaching, learning, and assessment strategies. They use instructional strategies and technologies in ways
that encourage exploration, creativity, and information literacy skills (e.g., critical thinking, problem solving, evaluation of information gained) so that young adolescents are actively engaged in their learning. They use instruction that is responsive to young adolescents’ local, national, and international histories, language/dialects, and individual identities (e.g., race, ethnicity, culture, age, appearance, ability, sexual orientation, socioeconomic status, family composition).

Element c. Middle Level Assessment and Data-informed Instruction: Middle level teacher candidates develop and administer assessments and use them as formative and summative tools to create meaningful learning experiences by assessing prior learning, implementing effective lessons, reflecting on young adolescent learning, and adjusting instruction based on the knowledge gained.

Element d. Young Adolescent Motivation: Middle level teacher candidates demonstrate their ability to motivate all young adolescents and facilitate their learning through a wide variety of developmentally responsive materials and resources (e.g., technology, manipulative materials, information literacy skills, contemporary media). They establish equitable, caring, and productive learning environments for all young adolescents.

National Science Teachers Association Standards

NSTA Standard 1: Content Knowledge
Effective teachers of science understand and articulate the knowledge and practices of contemporary science. They interrelate and interpret important concepts, ideas, and applications in their fields of licensure.

Preservice teachers will:
1c) Show an understanding of state and national curriculum standards and their impact on the content knowledge necessary for teaching P-12 students.

NSTA Standard 2: Content Pedagogy
Effective teachers of science understand how students learn and develop scientific knowledge. Preservice teachers use scientific inquiry to develop this knowledge for all students.

Preservice teachers will:
2a) Plan multiple lessons using a variety of inquiry approaches that demonstrate their knowledge and understanding of how all students learn science.
2b) Include active inquiry lessons where students collect and interpret data in order to develop and communicate concepts and understand scientific processes, relationships and natural patterns from empirical experiences. Applications of science-specific technology are included in the lessons when appropriate.

NSTA Standard 3: Learning Environments
Effective teachers of science are able to plan for engaging all students in science learning by setting appropriate goals that are consistent with knowledge of how students learn science and are aligned with state and national standards. The plans reflect the nature and social context of science, inquiry, and appropriate safety considerations. Candidates design and select learning activities, instructional settings, and resources—including science-specific technology, to achieve those goals; and they plan fair and equitable assessment strategies to evaluate if the learning goals are met.

Preservice teachers will:
3a) Use a variety of strategies that demonstrate the candidates’ knowledge and understanding of how to select the appropriate teaching and learning activities – including laboratory or field settings and applicable instruments and/or technology- to allow access so that all students learn. These strategies are inclusive and motivating for all students.
3b) Develop lesson plans that include active inquiry lessons where students collect and interpret data using applicable science-specific technology in order to develop concepts, understand scientific processes, relationships and natural patterns from empirical experiences. These plans provide for equitable achievement of science literacy for all students.
3c) Plan fair and equitable assessment strategies to analyze student learning and to evaluate if the learning goals are met. Assessment strategies are designed to continuously evaluate preconceptions and ideas that students hold and the understandings that students have formulated.
STANDARD 1: Facilitate and Inspire Student Learning and Creativity: Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments.

STANDARD 2: Design and Develop Digital-Age Learning Experiences and Assessments: Teachers design, develop, and evaluate authentic learning experiences and assessment incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the NETS•S.

STANDARD 3: Model Digital-Age Work and Learning: Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society.

Course Alignment with Common Core Standards (Used in some states, but still very good)

College and Career Readiness Mathematics Practice Standards
1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Mathematics Standards
1. Measurement & Data
2. Operations & Algebraic Thinking
3. Expressions & Equations
4. Ratios & Proportional Relationships

College and Career Readiness ELA Standards

Reading. Key ideas and details.
CCSS.ELA-Literacy.RL.3.1 CCSS.ELA-Literacy.RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
CCSS.ELA-Literacy.RL.4.1 CCSS.ELA-Literacy.RI.4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
CCSS.ELA-Literacy.RL.5.1 CCSS.ELA-Literacy.RI.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
CCSS.ELA-Literacy.RL.6.1 CCSS.ELA-Literacy.RI.6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
CCSS.ELA-Literacy.RI.2.2 Identify the main topic of a multiparagraph text as well as the focus of specific paragraphs within the text.
CCSS.ELA-Literacy.RI.3.2 Determine the main idea of a text; recount the key details and explain how they support the main idea.
CCSS.ELA-Literacy.RI.4.2 Determine the main idea of a text and explain how it is supported by key details; summarize the text.
CCSS.ELA-Literacy.RI.4.3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.
CCSS.ELA-Literacy.RI.5.2 Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.
CCSS.ELA-Literacy.RI.5.3 Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.
CCSS.ELA-Literacy.RI.6.2 Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
CCSS.ELA-Literacy.RI.6.3 Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).
CCSS.ELA-Literacy.RI.7.2 Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.
CCSS.ELA-Literacy.RI.8.1 Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
CCSS.ELA-Literacy.RI.8.2 Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.
CCSS.ELA-Literacy.RI.8.3 Analyze how a text makes connections among and distinctions between individuals, ideas, or events (e.g., through comparisons, analogies, or categories).

Writing.
CCSS.ELA-Literacy.W.2.2 Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.
CCSS.ELA-Literacy.W.2.3 Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure.
CCSS.ELA-Literacy.W.3.2d Provide a concluding statement or section.
CCSS.ELA-Literacy.W.4.1b Provide reasons that are supported by facts and details.
CCSS.ELA-Literacy.W.4.1d Provide a concluding statement or section related to the opinion presented.
CCSS.ELA-Literacy.W.4.2e Provide a concluding statement or section related to the information or explanation presented.
CCSS.ELA-Literacy.W.5.1b Provide logically ordered reasons that are supported by facts and details.
CCSS.ELA-Literacy.W.5.1d Provide a concluding statement or section related to the opinion presented.
CCSS.ELA-Literacy.W.6.1e Provide a concluding statement or section that follows from the argument presented.
CCSS.ELA-Literacy.W.7.1a Introduce claim(s), acknowledge alternate or opposing claims, and organize the reasons and evidence logically.
CCSS.ELA-Literacy.W.7.1b Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.
CCSS.ELA-Literacy.W.8.1a Introduce claim(s), acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically.
CCSS.ELA-Literacy.W.8.1b Supportclaim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.

Speaking and Listening.
CCSS.ELA-Literacy.SL.2-8.1 Participate in collaborative conversations with diverse partners about grade 2-8 topics and texts with peers and adults in small and larger groups.
CCSS.ELA-Literacy.SL.3-8.4 Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.
CCSS.ELA-Literacy.SL.6.4 Present claims and findings, sequencing ideas logically and using pertinent facts, details, and descriptions to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.
CCSS.ELA-Literacy.SL.7.4 Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.
CCSS.ELA-Literacy.SL.8.4 Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.

Language.
CCSS.ELA-Literacy.L.2-8.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.
CCSS.ELA-Literacy.L.2-8.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 2 reading and content, choosing flexibly from an array of strategies.

Field Experience:
Candidates will participate in thirty hours of a designated field experience that takes place in EDEE 382 or 384. You will have to complete one lesson plan in science for EDEE 368 using the classroom as your laboratory. Science lesson plans must be approved by the methods instructor and supervisor prior to teaching them in the classroom.
### 3.3 Course Schedule, Readings, and Assignments:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
<th>Date</th>
<th>Readings/HW/Online</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5-E LP, Heart Rate 3-Step LP, Drops of Water</td>
<td>Jan 17</td>
<td>NSTA Registration and Pre-Assessment</td>
</tr>
<tr>
<td>2</td>
<td>Seasons, Misconceptions Technology Graphic Organizers</td>
<td>Jan 24</td>
<td><em>NSTA Pre-Assessment is Due.</em> See Reading List (#1-3)</td>
</tr>
<tr>
<td>3</td>
<td>Diversity &amp; Assessment Literature &amp; Science</td>
<td>Jan 31</td>
<td>See Reading List (#4-7)</td>
</tr>
<tr>
<td>4</td>
<td>NGSS, Un-packing Stds. Variables</td>
<td>Feb 7</td>
<td>See Reading List (#8-10)</td>
</tr>
<tr>
<td>5</td>
<td>Assessment Portfolio</td>
<td>Feb 14</td>
<td><em>5-E LP due (groups or pairs or solo)</em> See Reading List (#11-15)</td>
</tr>
<tr>
<td>6</td>
<td>Design an Experiment NOS</td>
<td>Feb 21</td>
<td><em>Assessment Portfolio due (groups) OAKS</em> See Reading List (#16-19)</td>
</tr>
<tr>
<td>7</td>
<td>Cleaner Tomorrow</td>
<td>Feb 28</td>
<td><em>Reflection 1 due in DropBox on OAKS</em></td>
</tr>
<tr>
<td>8</td>
<td>No Class</td>
<td>Mar 7</td>
<td><em>Spring Break</em></td>
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<tr>
<td>9</td>
<td>PBL – Cultural Science</td>
<td>Mar 14</td>
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<tr>
<td>10</td>
<td>Website Comparison Claim-Evidence-Reasoning: Adaptations</td>
<td>Mar 21</td>
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<tr>
<td>11</td>
<td>Constructivism &amp; Inquiry Candles – Clyde</td>
<td>Mar 28</td>
<td><em>NSTA Online Activity due in DropBox on OAKS</em> See Reading List (#20-22)</td>
</tr>
<tr>
<td>12</td>
<td>Inquiry Circuits</td>
<td>April 4</td>
<td>See Reading List (#23-24)</td>
</tr>
<tr>
<td>13</td>
<td>STEM &amp; PBL Parachutes</td>
<td>April 11</td>
<td><em>Science Notebooks due</em></td>
</tr>
<tr>
<td>14</td>
<td>FOSS kits and Inquiry Levers</td>
<td>April 18</td>
<td><em>5E Inquiry LP due (pairs or solo) at 8:00 p.m. in DropBox</em> See Reading List (#27-28)</td>
</tr>
<tr>
<td>15</td>
<td>Literature &amp; Science: Freddy Course Evaluations</td>
<td>April 25</td>
<td>See Reading List (#29-34)</td>
</tr>
<tr>
<td>16</td>
<td><strong>3.15 FINAL EXAM Date and Time</strong></td>
<td>April 29</td>
<td><strong>Saturday 8:00-11:00 a.m.</strong></td>
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</tbody>
</table>
3.4 Examination and Assignment Due Dates

**Final Exam:**
There will be one Exam. The Exam will cover information learned over the course; readings, in-class discussions, class notes, and activities. It will include short answer and multiple choice questions. A study guide will be given for the Exam. The Final Exam will also include the development of an Inquiry LP.

**PAPERS:** Papers will be word processed using the style of the Publication Manual of the American Psychological Association (Fifth Edition, 2001).

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Due Date</th>
<th>Points</th>
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<tbody>
<tr>
<td>Participation</td>
<td></td>
<td>25</td>
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<tr>
<td>Reflective Essay</td>
<td>2/28</td>
<td>40</td>
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<tr>
<td>5-E Learning Cycle LP – (pairs or solo)</td>
<td>2/22</td>
<td>50</td>
</tr>
<tr>
<td>Assessment Portfolio (pairs or groups)</td>
<td>3/14</td>
<td>50</td>
</tr>
<tr>
<td>NSTA Online Content Assessment</td>
<td>3/21</td>
<td>50</td>
</tr>
<tr>
<td>Science Notebooks</td>
<td>4/11</td>
<td>40</td>
</tr>
<tr>
<td>5-E Inquiry LP (pairs or solo)</td>
<td>4/18</td>
<td>50</td>
</tr>
<tr>
<td>Final Exam*</td>
<td>4/29</td>
<td>120</td>
</tr>
</tbody>
</table>

**TOTAL POINTS*** 425

*Points will change due to the questions used for the Final Exam.

3.6 Behavioral Expectations for Students: Each teacher candidate is expected to participate in classroom discussions and group work. You will not be allowed to text, phone, or email during class. These are all aspects of your professionalism and dispositions. Tardies and absences are also considered part of this assignment. Failure to sign up for the NSTA Learning Center will result in a loss of 5 points for participation. A breakdown of participation points is below:

- NSTA Learning Center – 5 pts.
- Discussion in Class that includes references to readings – 5 pts.
- Completing activities in class by taking notes, recording data, and writing conclusions – 5 pts.
- Contributing to pair and group work during activities – 5 pts.
- Dispositions related to attendance, working with others, and verbal discussions – 5 pts.

3.6 Professional Behavior and Dispositions: Students are responsible for all content and assignments for each class. They will be expected to demonstrate professional behaviors consistent with the following dispositions:

- The belief that all students can learn.
- Value and respect for difference.
- Value of positive human interaction.
- Intellectual curiosity and willingness to learn new knowledge.
- A commitment to inquiry, reflection and self-assessment.
- Value of responsible, collaborative, and cooperative work.
- Sensitivity to community and cultural context.
- Responsible and ethical practice

School of Education Mission:
The mission of the School of Education at the College of Charleston is the development of educators and health professionals to lead a diverse community of learners toward an understanding of and active participation in a highly complex world. In pursuit of this mission, faculty and students will demonstrate:

- intellectual curiosity and rigor;
- reflective, research-based practice;
- collaboration and consensus building;
- field-oriented service and community outreach;
- and cultural sensitivity and understanding.

MAKE THE TEACHING AND LEARNING CONNECTION

**Element of Teacher Competency 1: Understand and value the learner.**

- **Standard I:** Evidence theoretical and practical understanding of the ways learners develop.

**Element of Teacher Competency 2: Know what and how to teach and assess and how to create an environment in which learning occurs.**

- **Standard II:** Demonstrate understanding and application of the critical attributes and pedagogy of the major content area.
- **Standard III:** Evidence a variety of strategies that optimize student learning.
- **Standard VI:** Demonstrate an understanding of the continuous nature of assessment and its role in facilitating learning.

**Element of Teacher Competency 3: Understand oneself as a professional**

- **Standard IV:** Participate in informed personal and shared decision making that has as its focus the enhancement of schooling and the profession.
- **Standard V:** Communicate effectively with students, parents, colleagues, and the community.
- **Standard VII:** Show an understanding of the culture and organization of schools and school systems and their connection to the larger society.

**Middle Grades Mission Statement**

The mission of the Middle Grades program in the Department of Teacher Education at the College of Charleston is to develop reflective practitioners with the knowledge, skills, and dispositions to help adolescent learners succeed. The program develops collaborative, reflective practitioners that understand the unique needs of adolescent learners through high quality formal and informal instructional settings. The Middle Grades program prepares adolescent practitioners to develop effective teaching methods and learning environments, reflect on instruction, and make a positive impact on student learning.