Course Description:
This is an advanced course in teaching science and mathematics at the K-12 grade levels. In this course Teacher/Students (TSs) will study the elements necessary to help *all* elementary and adolescent students achieve high-quality mathematics and science instruction, including the nature of science and mathematics, problem-based and inquiry methods of teaching, curriculum development, assessment, and lesson planning, and STEM integration with literacy. The organization, content, and delivery of this course will focus on scientific processes, problem- and inquiry-based instruction, and the alliance of factual knowledge, procedural proficiency, and conceptual understanding.

2.6 Student Learning Outcomes:

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Assessment Method and Performance Expected</th>
</tr>
</thead>
<tbody>
<tr>
<td>What will students know and be able to do when they complete the course?</td>
<td>How will each outcome be measured? Who will be assessed, when, and how often? How well should students be able to do on the assessment?</td>
</tr>
<tr>
<td>1. Recognize the importance of all students’ ideas, interests, beliefs, experiences, and needs in the design, implementation, differentiation, and evaluation of mathematically- and scientifically-based lessons.</td>
<td>Development of science or mathematics-based web pages for famous scientists or mathematicians. All students will complete biographies in pairs based upon grade level or content area. All students should score “acceptable” in greater than 90 percent of the rubric criteria.</td>
</tr>
<tr>
<td>2. Develop instructional practices derived from current research-based information.</td>
<td>Summarize the main content and focus of a research study. This paper should present the science or mathematics themes, implications to teaching, and results of any research and relate themes to Next Generation Standards or Common Core and NCTM. All students will complete one summary of a research article with supplementary resources. All students should score “acceptable” in greater than 90 percent of the rubric criteria.</td>
</tr>
<tr>
<td>3. Demonstrate knowledge of the content and process/practice standards as prescribed by the NCTM, Common Core, Next Generation Science Standards, and the SC Standards.</td>
<td>Develop an “un-packing” list of learning outcomes and assessment items derived from standards for a grade level and content area. All students will complete a 9-week semester of standards. All students should score “acceptable” in greater than 90 percent of the rubric criteria.</td>
</tr>
</tbody>
</table>
Communication Expectations

Expectations you should have of me:
I will answer emails sent to me within 24 hours, except weekends/holidays.
I will answer technical discussion boards within 48 hours, except weekends/holidays.
I will answer other discussion board questions within 48 hours, except weekends/holidays.

My expectations of you:
You should expect to dedicate 2-3 times per week engaging with course materials (especially the discussion board) on OAKS, not including reading time, or time to complete assignments. If you go over 8 days without engaging the online material, including engaging with discussion with your peers, you will receive a WA for the course. Any exceptions due to location, contextual issues, and Internet access must be communicated to the professor ASAP.

You should read the information from online resources by day 5 of the week and post a discussion response by day 7. During day 6 or 7, you should be able to respond or reply to a classmate’s post. Discussion means commenting back and forth.

Online Communication
Since this is an online course, you will be required to participate in many online discussions with the professor and peers. In order to do this, we must build a community online that allows all to express their feelings, ideas, comments, and frustrations. The following are guidelines for participating in this online community:

- Everyone must comment in both number and quality;
- Polite and cordial argumentation is healthy;
- Respect what others have to say and cite others when appropriate;
- Do not attack a person, rather argue the idea.

Navigating Through the Course
I suggest the following in navigating through the course:
1. Start on the homepage with any announcements.
2. Look at the calendar to see if there are any items that are due.
3. Go to Content.
4. Follow the Module outlines from start to finish. You may go back at any time to reread the directions or content.
5. Each Module starts with objectives; see if you can finish these by the end of each Module.
6. Lectures & Readings contain the main ‘content’ and information for learning. You should be able to read all of the information, articles, or postings within the first 4 days of class.
7. Media Sources contains any video or audio support for the lectures and readings. These can be considered part of the content and information to learn.
8. Explore sections will include any activities that you will have to do alone, in pairs, or in groups. This is the action part of the course and you will be doing something; researching, arguing, constructing, posting, and responding.
9. Assignments will have all of the assignments that you are to complete, where to turn them in, and the due date.
10. Discussion will take you to the discussion board where you will find any discussion topics and threads to follow.

Format of Course Content

Lecture and Readings
You will find some lectures recorded using voicethread. Most of these will be a guided lecture through a PPT presentation with some additional slides and explanations of content. Please progress and complete each of these. The readings are a compilation of online readings, which include chapters and articles. Most of these can be found online and are linked in the Module.

Explore
These are activities that you will do in the local Unit or complete online. There will be some projects or assignments that have you go outside and complete a task. These are for the benefit of gaining experience. Assignments to be turned in are described later.

Assignments
Some Modules will have assignments. Specific due dates with instructions will be given at the beginning of each Module. Some assignments will require you to work in pairs or groups. The DropBox will be accessible to submit all assignments. Each assignment will have a specific method for labeling each assignment.

Discussions
Each Module will have a corresponding discussion or discussions. It is required that you make a minimum of two comments per discussion topic. This can consist of an original comment or a response to someone else's comment. Secret Word – Edisto. The quality and depth of the comments will be assessed. Since this is asynchronous learning, it is expected that you will log into the course at least 2 times during the duration of the Module.

When you have a question that you would normally ask a classmate, use the OAKS discussion board called STUDENT LOUNGE. I will not be reading or answering those discussions, though you can choose to “escalate” an issue or question to the technical issues discussion board.

If you have a question about the module/assignments that are outside the content topics of discussion, post it to the OAKS discussion board called MODULE/ASSIGNMENT Qs. Use the assignment number in the subject heading of the discussion. I expect at least two posted responses before I make a contribution to that thread. I will respond in about 48 hours, unless an earlier response by me is warranted.

If you have a technical question about the course that would benefit others’ hearing your question, post it to the OAKS discussion board called TECHNOLOGY. I will respond within 48 hours—certainly students are invited to respond earlier, if they have a helpful response.

If you need to contact me about an issue that pertains only to you, please contact me via email.

Given the large amount of time you will spend on discussion boards, I want to be clear that respectful communication is required. For all of us to learn, everyone needs to feel they can share their reflections in a non-threatening environment. You can certainly critique ideas/assumptions of theories without
being critical of a person’s feelings or identities. I expect you to take care (i.e., extra time) in how you express yourself in the online forum, to be sure your words are not mis-construed.

2.7 Attendance Policies for Online Learners:

You access the class 2-3 times per week participating and responding to the discussions, and engaging with course materials (especially the discussion board) on OAKS; not including reading time or time to complete assignments. If you go over 8 days without engaging the online material, including engaging with discussion with your peers, you will receive a WA for the course. Any exceptions due to location, contextual issues, and Internet access must be communicated to the professor ASAP.

The point of contact will be the OAKS interface; all of our assignments, instructions, class materials, as well as the discussion board are all on OAKS. For the greatest success in this course, you must be able to “visit” with us on OAKS at least twice a week. If your internet access is compromised, you may need to reconsider if this is the right course for you. You should download the readings ahead of time in order to work offline.

Please be sure to check for class announcements on the News tab on OAKS; and you must check your college email account for any communications from me.

I have scheduled approximately 25-50 pages of reading per module, in addition to links to videos/lectures that introduce and deepen our understanding of concepts from these readings. The videos and lectures are not required material since some of you will not be able to download. Instead, slides or PowerPoint will be used to summarize and present some content. Although we are online, this course is highly interactive—this is not the kind of class where you can read through materials, take a quiz, and be done with the work. You will spend a lot of time on the discussion boards for the course, working through the course content and the concepts needed to become familiar with the range of social science methods. A lot of what we will do is to learn from each other; we will discuss the readings assigned, post/answer questions on some of my lecture/materials. Additionally, through google docs students will be workshopping your own research proposals—which will also require research/reading beyond the syllabus and into the pertinent sections of the optional reading list, and other additional readings useful to your research topic.

Readings will be assigned from the required textbooks as well as peer-review journals and books, all of which are available on OAKS. However, with the full citation in the syllabus, you have all the info you need to procure these readings from your campus library. All other lectures/class materials, and assignment instructions are available on OAKS. A separate document that contains optional readings is also organized by module; these are for students seeking more background on a topic (if they have been completely unexposed to the assumptions and procedures of those methods), and students are required to draw from these optional reading lists to develop their research designs. For example, if in your research design you want to develop a project using Q-Method, then you should refer to and cite those readings on both the syllabus and the optional reading list when justifying the methods you will use in your study using the same method. The list will be updated during the semester.

Academic honesty and professional ethics must be adhered to at all times. Please refer to the College’s policy on plagiarism and academic honesty; for a sample guideline of professional ethics, you can look at http://www.aag.org/cs/about_aag/governance/statement_of_professional_ethics, but check your professional organization for its own ethics statements.
2.8 Grading Policy:
Letter Grades Percentage Range Grade Points Interpretation
A 93 – 100% 4.0 Superior
B+ 88 - 92% 3.5 Very Good
B 83 – 87% 3.0 Good
C+ 78 - 82% 2.5 Fair
C 74 - 77% 2.0 Acceptable
D** 70 - 73% 1.0 Barely Acceptable
F 0 - 69% 0.0 Unacceptable
** A grade of 73 or below is considered a failing grade for all Graduate courses.

2.9 Technical Resources:
Have appropriate technical skills to be an online student. One important resource for navigating OAKS is: http://blogs.cofc.edu/scs/archive/tutorials/ or http://blogs.cofc.edu/oaks/tutorials/

Another important resource to help fill gaps in your technical knowledge is: http://blogs.cofc.edu/studentreadinessforonlinelearning/ (I recommend that you take their online readiness quiz, to ensure you know whether you have any gaps—it’s likely you do!)

We will be using Google Docs in addition to OAKS, for both the glossary work and for workshopping each of your proposals; be sure to have a google drive account with CofC and familiarize yourself with using this resource. See tutorials at http://blogs.cofc.edu/tlttutorials/tag/google-docs/. Never submit a google doc into the OAKS DropBox; you must download the google doc and save it on your own computer before you upload your final research design to the OAKS DropBox.

2.9 Required and Optional Textbooks:
There is no textbook for the course. Readings are supplied online in OAKS.

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.

Class Supplies:

Common Core Standards (both practice and content) for mathematics K-12 (online http://www.corestandards.org/Math)

NCTM Standards (both process and content) for K-12 (online http://nctm.org/standards)

Next Generation Science Standards (online http://www.nextgenscience.org/)
SC site aligning SC Standards with Common Core Standards (online http://ed.sc.gov/agency/se/Teacher-Effectiveness/Standards-and-Curriculum/ELAandMathematicsCrosswalks.cfm)

Attendance Policy
Excessive absences (i.e., more than 15% - approximately 5 hours/2 classes – may result in receiving a “WA/F.” Students will be tardy if they arrive in class within the first 20 minutes after class has started. Three tardies result in one absence. Students will be absent if they arrive after 20 minutes or if they leave class early. Regarding being tardy or having to leave class early, exceptions will be made on an individual basis, but students must speak with me about extenuating circumstances for such exceptions. Regarding absences, if a student exceeds allowable absences due to extenuating circumstances beyond the student’s control, a panel of professors from that semester will review the circumstances and make a final decision.

If a student exceeds allowable absences due to extenuating circumstances beyond the student’s control, a panel of professors from that semester will review the circumstances and make a final decision. SNAP students, if they wish special accommodations, must see the professor within the first two weeks of the course or as soon as they find out about potential accommodations if determined mid semester. Athletes who will miss class due to athletic events must see the professor within the first two weeks of the course and submit athletic schedule for the semester, identifying classes that will be missed. No other absences will be allowed for athletes who miss the maximum allowable absences due to athletic events.

Method of Instruction
The main method of delivery will be online and include discussion, lecture, videos, group learning, group projects, and interactive activities.

Online Communication
Since this is an online course, you will be required to participate in many online discussions with the professor and peers. In order to do this, we must build a community online that allows all to express their feelings, ideas, comments, and frustrations. The following are guidelines for participating in this online community:

- Everyone must comment in both number and quality;
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5. Each Module starts with objectives; see if you can finish these by the end of each Module.
6. Lectures & Readings contain the main ‘content’ and information for learning. You should be able to read all of the information, articles, or postings within the first 4 days of class.
7. Media Sources contains any video or audio support for the lectures and readings. These can be considered part of the content and information to learn.
8. Explore sections will include any activities that you will have to do alone, in pairs, or in groups. This is the action part of the course and you will be doing something; researching, arguing, constructing, posting, and responding.

9. Assignments will have all of the assignments that you are to complete, where to turn them in, and the due date.

10. Discussion will take you to the discussion board where you will find any discussion topics and threads to follow.

How to Access the Communication Tools

Lecture and Readings: You will find lectures recorded using voicethread. Most of these will be a guided lecture through a PPT presentation with some additional slides and explanations of content. Please progress and complete each of these. The readings are a compilation of online readings, which include chapters and articles. Most of these can be found online and are linked in the Module.

Media Sources: You will find links to various videos, podcasts, or streaming media sources that will help you develop skills of analysis. Watch and complete all media sources. Summarizing these may help you apply the content to your assignments and discussions.

Explore: These are activities that you will do or complete online. In addition to the readings, watching videos, and listening to lectures or podcasts, these are activities that are web-based and will involve you or a pair of students to complete a task that involves finding 'data' online to complete the task, which will usually be a set of questions to answer. Discussions may be used to follow-up on the activity.

Assignments: Some Modules will have assignments. Specific due dates with instructions will be given at the beginning of each Module. Some assignments will require you to work in pairs or groups. The Dropbox will be accessible to submit all assignments. Each assignment will have a specific method for labeling each assignment.

Discussions: Each Module will have a corresponding discussion or discussions. It is required that you make a minimum of two comments per discussion topic. This can consist of an original comment or a response to someone else's comment. Secret Word – Edisto The quality and depth of the comments will be assessed. Since this is asynchronous learning, it is expected that you will log into the course at least 2 times during the duration of the Module.

Completion of all assigned readings and assignments ON TIME.

See Course Assignments below for detailed descriptions.

Responsibility for ALL course content
Including lecture, outside readings, handouts, research, etc.

Responsibility for keeping up with grades and attendance
If you miss a class, ask a classmate for the missed assignments and notes.

2.10 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](http://csl.cofc.edu).

### 2.11 Academic Integrity Statement:

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 both by 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. Secret Word – Edisto. Other forms of cheating include possessing or using an unauthorized study aid (which could include accessing information via a cell phone or computer), 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://studentaffairs.cofc.edu/honor-system/studenthandbook/index.php](http://studentaffairs.cofc.edu/honor-system/studenthandbook/index.php)

**Activities and Assignments:**

**Assignments:**
Summary of Science or Mathematics Research 50 points
Mini-unit 100 points
Science and Mathematics Notebook 50 points
Standards “un-packing” 75 points
Participation and Attendance 25 points

Evaluation Scale

<table>
<thead>
<tr>
<th>Letter Grades</th>
<th>Percentage Range</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>91-100%</td>
<td>4.0</td>
</tr>
<tr>
<td>B+</td>
<td>89-90%</td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>84-88%</td>
<td>3.0</td>
</tr>
<tr>
<td>C+</td>
<td>82-83%</td>
<td>2.3</td>
</tr>
<tr>
<td>C</td>
<td>77-81%</td>
<td>2.0</td>
</tr>
<tr>
<td>F</td>
<td>≤76%</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Course Assignments:
Due dates for course assignments, as well as scheduled exams, are listed on the tentative daily schedule at the end of the syllabus. Any changes will be announced in class or posted on OAKs. All assignments must be turned in during the class on the date due. If, for medical or serious personal reasons, an assignment is late, the instructor should be informed of the reasons. Otherwise, each late course assignment will receive a FIVE-PERCENT deduction per day that it is late. DO NOT give assignments to School of Education personnel. Assignments will NOT be accepted via email (unless specified explicitly).

Written and Oral Communication
TSs are expected to use correct grammar at all times. Points will be deducted on written assignments for grammatical errors. All references must follow the American Psychological Association (APA) Guidelines for Term Papers. Writing Lab is located on the first floor of Addlestone Library (Monday through Thursday 9:00 am to 9:00 pm and Friday 9:00 am to noon). Further, it is imperative that TSs use correct grammar in all oral communication, especially during field experiences. Classroom teachers, student peers, and I will collaborate to eliminate all oral grammatical errors, using an approach of constructive criticism.

1. Summary of Science or Mathematics Research
TSs will be expected to search for a research publication and summarize the main content and focus of the study. This paper should present the science or mathematics themes, implications to teaching, and results of any research and relate themes to Next Generation Standards or Common Core and NCTM. TSs will have to present the summary and classroom implications in a PPT. or Word document online in OAKS.

2. Science Inquiry or Mathematics Problem-Based Mini-Unit
TSs will develop and demonstrate in pairs or groups an inquiry or problem-based mini-unit that reflects performance-based standards. The lesson activities must have students collect, organize, and analyze data.

3. Science or Mathematics Notebook
TSs will be required to maintain a notebook that contains classroom notes, any homework, or reading summaries. This will be turned in twice during the semester.
4. **Standards Un-Packing Project**
   TSs will develop a list, which is at least 9-weeks long, of learning outcomes and assessment items in their content area based upon performance-based standards.

5. **Class Preparation and Participation**
   During the asynchronous class, there will be a number of online discussions and activities that will involve communicating with one another. In order to earn participation credit for classwork activities and discussions, TSs must be present and have completed the necessary readings and preliminary work. For any online work or discussion, TS must respond within the timeframe of a week.

**Program-Specific Elements**

**Course Objectives**

All teacher preparation programs in the College of Charleston’s School of Education (SOE) are guided by a commitment to the conceptual framework of “Making the Teaching and Learning Connection.” Three elements of teacher competency (ETS) are fundamental to this framework; teachers must (1) understand and value the learner, (2) know what and how to teach and assess within a conducive learning environment, and (3) understand themselves as professionals. In addition, these competencies are foundational to the learning and assessments within this course, facilitating the development of knowledge, skills, and dispositions necessary for becoming an effective teacher.

Below are the specific end-of-course outcomes related to these teacher competencies. They are derived from the standards set forth by the National Council of Teachers of Mathematics (NCTM) National Science Teachers Association (NSTA) and relate to those of the (1) School of Education (SOE), (2) Council for Accreditation of Education Preparation (CAEP), (3) National Association for the Education of Young Children (NAEYC), (4) Association for Middle Level Education (AMLE), and State Standards for Teacher Education (SC). They, therefore, indicate the expectations for teacher candidates within the School of Education, early childhood teachers, elementary-school teachers, and middle-grades teachers.

1. Teacher candidates (TSs) will demonstrate how all students learn mathematics or science concepts. EHHP I; NAEYC 4b

2. TSs will recognize the importance of all students’ ideas, interests, beliefs, experiences, and needs in the design, implementation, differentiation, and evaluation of mathematically- and scientifically-based lessons. EHHP I; NAEYC 1a, 5; AMLE 3.K5, 3.D4, 4.P3; SC 4

3. TSs will develop instructional practices derived from current research-based information. EHHP III; NAEYC 1, 4b; AMLE 1.P5, 1.P10, 4.K3, 5.K2; SC 4 (diverse learning styles)

4. TSs will assess student knowledge and dispositions using ongoing, systematic informal and formal assessments. EHHP VI; NAEYC 3, 4b; AMLE 1.P6, 5.K8, 5.D5, 5.P4, 6(all)

5. TSs will communicate concepts, ideas, and philosophies about and through science and mathematics. EHHP II; NAEYC 4b; AMLE 4.K4, 4.D4, 4.P5
6. TSs will demonstrate knowledge of the content and process/practice standards as prescribed by the NCTM, Common Core, Next Generation Science Standards, and the SC Standards. EHHP II; NAEYC 4b, 5; AMLE 4, 6.K5; SC 7

7. TSs will demonstrate in-depth competency of mathematical or science knowledge and skills. EHHP II;

**Course Alignment with Common Core Standards**

**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.

**College and Career Readiness ELA Standards**

**Reading.**

- Key ideas and details.
- Integration of knowledge and ideas.
- Range of reading level and text complexity.

**Writing.**

- Text types and purposes.
- Production and distribution of writing.
- Range of writing.

**Speaking and Listening.**

- Comprehension and collaboration.
- Presentation of knowledge and ideas.

**Language.**

- Conventions of Standard English.

**Course Requirements:**

**Demonstration of SOE Dispositions**

Examples of how dispositions are evident are provided in italics.

- Belief that all students can learn, *participation and attitudes expressed about students and learning*
- Value and respect for individual differences, *interactions in class discussions and participation in group work*
- Value of positive human interactions, *participation in class and in group work*
- Exhibition and encouragement of intellectual curiosity, enthusiasm about learning, and willingness to learn new ideas, *participation in class and group discussions and performance on assessments*
- Dedication to inquiry, reflection, and self-assessment, *participation in class and group discussions; performance on assessments (especially the reading and course reflections assignments)*
- Value of collaborative and cooperative work, *thoughtful, constructive critiques of others’ work, participation in class activities*
- Sensitivity toward community and cultural contexts, *participation in class and group discussions, tolerating, discussing, and respectfully listening to differing points of views*
- Engagement in responsible and ethical practice, *performance on assessments, class attendance, and participation in group activities*
- Development of professional mastery over time, *performance over time in writing, thinking, and expression of knowledge*
## Tentative Weekly Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Format</th>
<th>Theme</th>
<th>Activities</th>
<th>Readings Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/29</td>
<td>F2F</td>
<td>Nature of Math</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/5</td>
<td>Online</td>
<td>Nature of Math</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/12</td>
<td>Online</td>
<td>Research Literature</td>
<td></td>
<td>Research Article Review. Read and write a report on the main topics and research of an article.</td>
</tr>
<tr>
<td>9/19</td>
<td>F2F</td>
<td>Nature of Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9/26</td>
<td>Online</td>
<td>Nature of Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><em>Framework for K-12 Science Education: Executive Summary</em></td>
</tr>
<tr>
<td>10/17</td>
<td>Break</td>
<td>Fall Break</td>
<td></td>
<td>Nothing</td>
</tr>
</tbody>
</table>
Reading List


*Framework for K-12 Science Education: Executive Summary.*


