MAE 4310 - Section 521 - Teaching Elementary Mathematics I - 3 Credit Hours
Class Meeting: Mondays 3:00 - 5:50 pm, Room B206

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I. Prerequisites: None

II. COURSE MATERIALS AND REFERENCES:

- Required:
  3. Binder: for PowerPoints and notes
  4. Supplies to add to kit: calculator, scissors, tape, glue stick, markers, ruler,
     Basic Calculator: smartphone calculators cannot be used on tests

- IMPORTANT NOTE: Materials required for class will be listed each week on the second slide of the Powerpoint presentation under “Students Bring”.

Other Materials: Lecture and chapter notes, lecture videos, review sheets, Powerpoints, practice problems and solutions, in and out of class assignments, resources and journal articles posted on Canvas and from the USF Library and additional resources as needed for presentations, group discussions, projects, etc. Additionally materials and additional classroom supplies will be needed. Class materials that will need to be printed and brought to class for class assignments will be posted on Canvas in the course shell. Hence, you should check CANVAS frequently to be sure that you are up to date on all needed materials and announcements.

- Internet Resources:
  - Principles and Standards for School Mathematics, NCTM, 2000 http://standards-e.nctm.org (free for NCTM members)
III. COURSE PURPOSE:

This course is required in the undergraduate program in Elementary Education. The course provides for the development of knowledge and skills necessary to prepare students to be teachers of mathematics in elementary schools. Such a course is recommended by the National Council of Teachers of Mathematics (NCTM) in its Guidelines for the Preparation of Teachers, and is required by the State of Florida Department of Education. This course will prepare students to be effective teachers, able to teach their students the mathematics as specified in FDOE mathematics frameworks and Sunshine State Standards.

IV. COURSE OBJECTIVES:

Upon completion of this course, students will have demonstrated:

A. Knowledge of the major goals and characteristics, including scope and sequence of elementary mathematics programs, and aspects of theories of learning as applied to the planning of instruction for the teaching of elementary school mathematics.

B. Knowledge of the current developments in education, including research that may affect the elementary school mathematics curriculum, with an emphasis on the Common Core State Standards for Mathematics and the Standards for Mathematical Practice.

C. Knowledge and the application of problem solving processes/strategies; properties of number systems; pre-number concepts and ideas; numeration concepts and principles; whole number concepts, principles and computational skills (algorithms); number theory concepts and principles; rational number (fraction and decimal concepts, principles and computational skills (algorithms); in the teaching of elementary school mathematics.

D. Knowledge of effective uses of concrete manipulatives in both instruction and assessment.

E. Knowledge of instructional methods that engender critical thinking in students, and
evidence that the candidate has engaged in critical thinking in the completion of coursework.

F. Knowledge of the relationship between the learning environment and student learning; demonstrates understanding of appropriate accommodations for the differing needs and diversity of students.

G. Develops learning experiences that require students to demonstrate a variety of applicable skills and competencies.

H. Determines and uses appropriate instructional methods and strategies for individuals and groups, using knowledge of first and second language acquisition processes; knowledge of instructional models, methods, and strategies.

I. Knowledge of current and effective ESOL teaching methodologies in planning and delivering instruction to ELLs; knowledge of instructional models, methods, and strategies.

J. Ability to apply content-based ESOL approaches to instruction; knowledge of instructional methods and strategies.

K. Ability to evaluate, select, and employ appropriate instructional materials, media, and technology for ESOL at elementary, middle, and high school levels; knowledge of curriculum, curriculum materials, and resources; knowledge of instructional technology.

L. Ability to evaluate, adapt, and employ appropriate instructional materials, media, and technology for ESOL in the content areas at the elementary level; knowledge of curriculum, curriculum materials, and resources; knowledge of instructional technology.

V. Instructional Strategies Used in this Course

This course will be taught through lecture, discussion, cooperative learning activities, question and answer sessions, direct instruction, course readings from textbooks, journals, and/or handouts, large and small group discussions, instructor modeling, independent student activities, student presentations, and discussion/online formats, student demonstrations, and role playing. Reading of the textbook is mandatory. Knowledge of content is necessary for classroom involvement in activities and discussions. Emphasis is placed on hands-on, manipulative-based activities, and reflective thinking.

VI. COURSE REQUIREMENTS, RESPONSIBILITIES, and POLICIES.

A. Professionalism: Because this course is part of an accredited program that leads to a professional certification, students must demonstrate behavior consistent with a professional career. Failure to demonstrate such conduct will impact a student’s grade as noted in the course syllabus.
Students must:

- Attend all class meetings beginning to end.
- Be prepared with all necessary handouts, tools, and materials.
- Complete and submit all assignments on time. See assignment policy below. Students should maintain a file of all graded assignments until after receiving an official grade notification from the registrar.
- Collaborate responsibly with colleagues in coursework.
- Participate in a professional manner in all class discussions and activities.

B. Professional Behavior: You are expected to act in a professional manner in this class, according to USFSM’s Professional Behavior Assessment. I reserve the right to deduct up to 5 points from your final semester average for displays of behavior that I consider unbecoming of an in-service or future teacher, and also report you as a "student of concern" in the USFSM COE. Such displays include, but are not limited to: habitual tardiness or leaving class early, acting in a disrespectful manner with the professor or other students; doing extraneous activities during class—text messaging, reading a book, doing homework, carrying on side-conversations with classmates, emailing, surfing the Internet, etc. In short, when you are in this class, I expect your attention to be entirely on our class activities. If you need to speak with me about a grade, please do so in private—not in front of other students. I also reserve the right to raise your final course grade up one level (A- to A, e.g.) for exceptional in-class displays of insight into our activities.

Academic Integrity: It is expected that all students will uphold the highest standards of integrity. A student’s name on any assignment will be considered a pledge that the work is solely that of the students.

C. Academic Dishonesty: The University considers any form of plagiarism or cheating on exams, projects, or papers to be unacceptable behavior. Please be sure to review the university’s policy in the catalog, USFSM Undergraduate Catalog or USFSM Graduate Catalog, the USF System Academic Integrity of Students, and the USF Student Code of Conduct.

Plagiarism is defined as "literary theft" and consists of the unattributed quotation of the exact words of a published text, or the unattributed borrowing of original ideas by paraphrase from a published text. On written papers for which the student employs information gathered from books, articles, or oral sources, each direct quotation, as well as ideas and facts that are not generally know to the public at large must be attributed to its author by means of the appropriate citation procedure. Citations should be made in APA 6th Edition form within the body of the text. Plagiarism also consists of passing off as one’s own, segments or the total of another person’s work.

Punishment for Academic Dishonesty will depend on the seriousness of the offense and may include receipt of an "F" with a numerical value of zero on the item submitted, and the "F" shall be used to determine the final course grade. It is the option of the instructor to assign the student a grade of F or FF (the latter indicating dishonesty) in the course.

Detection of Plagiarism [http://www.cte.usf.edu/plagiarism/plag.html](http://www.cte.usf.edu/plagiarism/plag.html)

The University of South Florida has an account with an automated plagiarism detection service.
which allows student assignments to be checked for plagiarism. I reserve the right to 1) request that assignments be submitted to me as electronic files and 2) electronically submit assignments to SafeAssignment or Turnitin.com. Assignments are compared automatically with a huge database of journal articles, web articles, and previously submitted papers. The instructor receives a report showing exactly how a student’s paper was plagiarized. For more information, go to http://www.ugs.usf.edu/catalogs/0304/adap.htm#plagiarism.

PLEASE REMOVE YOUR NAME FROM THE BODY OF YOUR PAPER AND REPLACE IT WITH YOUR USF ID#. ALSO REMOVE YOUR NAME FROM THE FILE NAME AND REPLACE IT WITH YOUR USF ID# (e.g., “U12345678 Essay 1.docx”) BEFORE SUBMITTING IT TO TURNITIN.

Pursuant to the provisions of the Family Educational Rights and Privacy Act (FERPA), students are requested to maintain confidentiality as a way to keep their personal contact information (i.e. name, address, telephone) from being disclosed to vendors or other outside agencies. By your submission, you are also agreeing to release your original work for review for academic purposes to Turnitin.

C. Attendance: Attending class is very important—it shows dedication to the teaching profession and is essential for you to master the strategies used and the content of the class. Punctuality, preparedness and participation are all signs of professionalism. As such, attendance will be taken every class session, and you are responsible for all material covered in each class. If you miss all or significant parts of two or more classes, you must talk with me personally, about the problem. Missing class will automatically result in a grade deduction for the final grade. Passing this course will only occur if you are present to receive class information. Assessments will rely heavily on information disseminated in class and from the readings.

During every class sessions, the instructor will distribute an attendance sheet to be signed. It is your responsibility during class to ensure that you have signed your name and marked yourself as either “on time” or enter the time of your late arrival. If your signature is not on the sheet, you will be marked absent. Signing the name of another individual is not permitted.

D. Academic Disruption: The University does not tolerate behavior that disrupts the learning process. The policy for addressing academic disruption is included with Academic Dishonesty in the catalog: USFSM Undergraduate Catalog or USFSM Graduate Catalog and the USF Student Code of Conduct. Such actions include texting, surfing the web, cell phone use, or any other disrespectful interruption of the lecture. Remember that your responsibility is to contribute to a productive learning environment. Consider the effects of your actions on you as well as others around you.

Computer and Technology use in class: Computer use in class, especially off-task computer use, can be a distraction to other students. Technology may be utilized to support coursework activities. While in class, you will use technology only for purposes related to this course. You are expected to be considerate of the instructor and other students while using technology. It is easy for technology to become a distraction to you and to those around you. Any observance of computer use for activities not directly related to class may
result in the student’s computer privilege being revoked for the remainder of the semester. And additionally, inappropriate uses will be noted and may affect your final grade. Negative technology use in class will reduce your participation grade by at least 1/2 letter grade, and may cause you to be dismissed from the class as the professor sees fit.

Appropriate Uses
- Taking notes.
- Following along with presentations, demonstrations, and other whole class activities.
- Engaging in assigned classroom tasks.
- Delivering classroom presentations or other assigned tasks.
- Facilitating discussions that require laptop/technology use.

Inappropriate Uses
- Displaying materials on screen which may be distracting or offensive to others.
- Instant messaging, e-mailing, surfing the Internet, playing games, writing papers, doing homework, etc.
- Keyboarding
- Talking on cell phone, text messaging, using pagers, or using other similar devices.
- Allowing distracting audio from any device.

Audio and Video-Recordings
- Recording of class via tape recorder, cell phone, or other recording devices is strictly prohibited without the express written permission of the instructor.
- Non-permission to sell class notes, materials, recordings: Students are not permitted to sell notes, materials, tests, recordings, or any other items related to this course. There is no limitation on sharing of class notes, particularly in support of a peer who is absent.

E. Contingency Plans: In the event of an emergency, it may be necessary for USFSM to suspend normal operations. During this time, USFSM may opt to continue delivery of instruction through methods that include but are not limited to: Canvas, Elluminate, Skype, and email messaging and/or an alternate schedule. It’s the responsibility of the student to monitor the Canvas site for each class for course specific communication, and the main USFSM and College websites, emails, and MoBull messages for important general information. The USF hotline at 1 (800) 992-4231 is updated with pre-recorded information during an emergency. See the Safety Preparedness Website for further information.

F. Disabilities Accommodation: Students are responsible for registering with the Office of Students with Disabilities Services (SDS) in order to receive academic accommodations. Reasonable notice must be given to the SDS office (typically 5 working days) for accommodations to be arranged. It is the responsibility of the student to provide each instructor with a copy of the official Memo of Accommodation. Contact Information: Disability Coordinator, 941-359-4714, disabilityservices@sar.usf.edu, www.usfsm.edu/Students/Disability/

G. Fire Alarm Instructions: At the beginning of each semester please note the emergency exit
maps posted in each classroom. These signs are marked with the primary evacuation route (red) and secondary evacuation route (orange) in case the building needs to be evacuated. See Emergency Evacuation Procedures.

H. Religious Observances: USFSM recognizes the right of students and faculty to observe major religious holidays. Students who anticipate the necessity of being absent from class for a major religious observance must provide notice of the date(s) to the instructor, in writing, by the second week of classes. Instructors canceling class for a religious observance should have this stated in the syllabus with an appropriate alternative assignment.

I. Assignments: All assignments must be submitted at the beginning of class on the day they are due. Assignments may only be emailed if the student is absent and the professor has been notified. A hard copy of the assignment should be turned-in as soon as possible. Each assignment will be graded according to the assignment description in this syllabus or applicable rubric. All assignments are to be double-spaced using a 12-point standard Times New Roman font. There are no planned extra credit assignments. Note: Unless previous arrangements have been made with the instructor, late assignments will not be accepted.

Points will be deducted for late assignments in the following manner:

- 20% of all points of the assignment are lost if not submitted in class or emailed by the beginning of class, but turned in no more than two days past the due date.
- An additional 10% will be lost each day after the second day.
- Assignments more than one week late will not be accepted without prior approval from the instructor.

All assignments are expected to be submitted on the assigned due date. Acceptance of late assignments is solely based on the discretion of the instructor. If accepted, late assignments will not receive full credit. If there is a problem, it is helpful to talk with me before it becomes a crisis. It is expected that you will approach each assignment seriously, investing the necessary time and energy to prepare your response. Here is a description of possible evaluation responses to your course assignments.

All assignments must be offered in a professional presentation. All work delivered must include the use of appropriate mathematics symbols (e.g., use of Microsoft Equation Editor) where applicable. The goal is for you to leave this course with the knowledge and materials that are readily pertinent for use in your courses.

Assignments may not be revised for resubmission after the due date so it is strongly recommended that students arrange to meet with the instructor in advance to receive feedback and additional guidance regarding progress on submissions. There are no extra credit assignments. If a student misses a class, it is the student’s responsibility to secure from other students the information missed or material distributed.

J. CANVAS Use: The class syllabus is posted in Canvas, an online course management system. In this class Canvas will be used for posting of Powerpoint presentations, assignments, grades, discussion boards, handouts, internet resources, etc. Information on how to use Canvas is available at: http://www.usfsm.edu/infocommons/students.php

- Web Portal Information: Every newly enrolled USF student receives an official USF
Students receive official USF correspondence and Canvas course information via that address.

- **Disclaimer:** This syllabus is an agreement between the instructor and the students registered in the course. It should be noted, however, that if any questions or problems involving official college policy or procedure, information and explanations as stated in the college catalog are always considered to override the language of a course syllabus. From time to time, this syllabus may need to be amended. The instructor will notify students via the USF Course Shell and/or email of any changes, additions, and/or deletions to the syllabus.

**VII. PREPARATION FOR EXAMS:**

All exams are to be completed at the scheduled time. No make-up exams are scheduled. Final exams will only be given on the assigned day. Please contact me in-advance if you will not be able to take an exam at the scheduled time. All exams will be based on material presented in class activities, lectures, discussion, and required readings. You are permitted to use a calculator (no smartphone calculators) and the manipulatives kit on all exams. However, sharing of materials is not permitted. The following represents my current thinking about the exams. I reserve the right to make changes or adjustments as needed.

**Test Format –** Any combination of Matching, Multiple Choice, Short Answer, Extended Response, and Essay.

**Midterm Exam Format – Matching, Multiple Choice, Short Answer, and Extended Response**

Expectations include: understanding the indicated concepts and the reasoning behind them; identifying problem types and their interpretations as provided in class and in the text; illustrating and verbally explaining methods for various computations; identifying student difficulty with certain mathematics topics; determining appropriate activities to promote students’ learning.

**The final exam** is multiple choice, comprehensive, and covers the entire course content.

**Recommendation:** Read All Assigned/Designated Chapters and Materials. Not all the information contained in the exams will be covered in class. You are expected to read the chapters and understand the content. If you do not understand the content, it is your responsibility to ask questions.

**VIII. CRITERIA FOR EVALUATION OF STUDENT PERFORMANCE:**

This is a professional preparation course and students are expected to behave in a manner appropriate for teachers. In addition, students are expected to participate in the classroom activities in a constructive manner, exhibiting those positive traits that are expected of teachers as provided by the Accomplished Practices and the Code of Ethics.
The following represents my current thinking about the evaluation of this course. I reserve the right to make changes/adjustments as needed.

**Assignments & Evaluation of Student Outcomes:** Students will participate in class discussions related to the readings and assignments connected with class and will participate in class activities designed to model appropriate instructional strategies for use in the mathematics classroom.

**General Requirements:** All assignments, presentation copies, reports, projects, etc., presented for submission, must be typed in a professional manner using the format of the American Psychological Association (APA) Publication Manual, 6th edition. Where applicable a complete Reference list should follow the report. A sample of the format of a citation is included elsewhere in the syllabus. Reports should be presented in Times New Roman Font, size 12, with 1 inch margins on all sides. All materials developed must include the use of appropriate mathematics symbols and citations where applicable. All assignments (e.g. from readings, reports, etc.) must be completed by the due date. Many of the activities in which we will engage will depend on your preparedness for class. Assignments may not be revised for resubmission after the due date so it is strongly recommended that students arrange to meet with the professor in advance to receive feedback and additional guidance regarding progress on submissions when needed. There are no extra credit assignments.

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<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
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<tr>
<td>Midterm Exam*</td>
<td>100</td>
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<tr>
<td>Final Exam (Comprehensive)</td>
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<tr>
<td>Attendance/Participation – 5 pts per class</td>
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<tr>
<td>Unpacking the Standards (2 @ 20 pts each)</td>
<td>40</td>
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<tr>
<td>Website/App Assignment</td>
<td>30</td>
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<tr>
<td>Journal Article Summaries (2 @ 20 pts each)</td>
<td>40</td>
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<tr>
<td>Pupil Study**</td>
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**Grading Scale:**

- **A** (4.00) 405 – 450 points
- **B** (3.00) 360 – 404 points
- **C** (2.00) 315 – 359 points
- **D** (1.00) 270 – 314 points
- **F** (0.00) 269 points or less

*The midterm exam is a **CRITICAL TASK** for this course. Students must achieve a score of 80% to pass this task. Students who score below 80% will be required to successfully correct ALL missed points. However, the original score will remain in the grade book. Students who do not successfully correct all missed points will not receive a passing grade in the course. Students may make full use of textual and/or human resources to aid in their exam corrections.

**The Pupil Study is a **CRITICAL TASK** for this course and must be added to your electronic portfolio on TaskStream. TaskStream is a web-based electronic portfolio required of all students in College of Education (COE) programs. TaskStream enables students to build media-rich online portfolios showcasing learning achievements, which can be shared with peers, instructors, parents, and...
employers. Further, it provides a way to submit documents, called critical tasks, to instructors for feedback and assessment. The COE uses these assessments to evaluate candidate progress toward meeting standards set by the Florida Department of Education, by the faculty, and by professional organizations. Further, the COE analyzes data from the assessments and uses the data for program planning in order to ensure continuous improvement.

Once your assignment is in your portfolio, it will be assessed using a rubric. You must earn a score of “3” (out of 5) or better on the critical task.

IX. ASSIGNMENT DESCRIPTIONS:

A. Attendance/Participation:

- Five points can be earned for each class. To earn the full 5 points you must:
  - be on-time and stay until class dismissal
  - have necessary materials and handouts
  - fully participate in discussions and group work
- Three absences will result in the lowering of the student’s grade by one full letter in addition to points lost for attendance.
- Two tardies will count as one absence.
- Students with more than 3 absences will not receive a passing grade in the course.

B. Unpacking the Standards Assignments:

This assignment will be completed twice this semester, once for a grade 2 standard, and once for an intermediate grades standard (3-5). For each assignment, you will select a CCSS standard from one of these CCSS Domains: Cardinality and Counting, Operations and Algebraic Thinking, Number and Operations in Base Ten, or Number and Operations – Fractions. You MUST sign up for the standard of your choice using the Canvas Discussion Board. Every student must choose a unique standard, first come, first served. Using the template provided on Canvas, ‘unpack’ the standard. You may use any internet resource to help you with this assignment, but you MAY NOT simply copy what is provided online. You must cite any sources you use to help you complete this assignment. To use a source and not cite it is considered plagiarism. These assignments must be submitted both online and in paper copy.

C. Math Website/App Assignment:

This assignment has two parts: you will use a Canvas discussion board to sign up to review a math website or a math app (Android or Apple), then you will respond to the review of three of your peers. Every student must review a different site – first come, first served. Only review a website or app you believe to be of good quality – one that you would recommend to other preservice teachers.
Part 1 (15 pts): Post your review on the Canvas discussion board titled “Website/App Reviews.” Your review will contain the following:
   a. A link to the website (or the name, format, and author of the app)
   b. One full paragraph that explains the features of the website/app
   c. One full paragraph in which you detail the potential instructional uses of the website/app
   d. One full paragraph in which you critically review one or more activities on the website/app.

Part 2 (5 pts each times 3): Explore three websites/apps reviewed by your peers. For each one, post a full paragraph that includes your reaction to both the website/app and your peer’s review on the Canvas discussion board.

For this entire project, put on your teacher hat, and think about the value of the website/app as a whole-class exploration, a small group tool, an individual exploration, or a site for use while students are at home. No credit will be given for reviews that focus on generalities (e.g., “I loved this site.” “It was great.” “I think kids will love this.”) Focus instead on specifics about what students will learn and how well the website/app will maintain the focused engagement of students.

D. Journal Article Summaries – ESSENTIAL ASSIGNMENT:

Two times during the semester, you are required to select and read an article from Teaching Children Mathematics that introduces teaching content ideas and enactment steps relevant to the assigned topics in this course (no older than 2000). PLEASE NOTE: You should pick from the feature articles in the journal because short, 2-3 page articles will not provide the type of information needed to complete this assignment. Step-by-step directions for finding articles are provided on Canvas under Files.

Your Journal Article Summary should be a complete report of 2-3 page, (Times New Roman 12pt, double-spaced, 1 inch margins) Your report should provide enough detail so that you could return to your paper years later and be able to integrate the teaching idea into your classroom.

A grading rubrics is included in the following outline below.

Each summary must include the following elements:
   ◆ The name of the article and the specific mathematics content,
   ◆ A summary of the teaching idea written in first person (I, me, my) that reflects how you would use the idea/activity in your future classroom. (10 points),
   ◆ How the lesson/activity helps develop students’ problem solving abilities and conceptual understanding. (2 points),
   ◆ A statement of the SSS Benchmark(s) and Standard(s) addressed in the article. List the benchmark number(s) and state the standard(s) (2 points),
   ◆ How you will adapt the lesson content or procedures to help ESOL learners gain understanding. Explain ways you could accommodate your ESOL students that are specific to this lesson/activity. The 3 websites for ESOL Math Strategies that are on Canvas under Files will help you with this section. Papers that omit this section will be returned ungraded. (2 points)
The summary will also be graded for the quality of writing, spelling, and grammar (3 points).

A bibliographic reference – you must make a sincere effort at APA format to receive this point – details of APA are below (1 point).

Additional Notes referencing your Journal Article Summary:
1. Do not use quotes or subheadings beyond what is indicated above.
2. A cover page is not needed, place your name, assignment name, and date in the header.
3. Number pages starting with one (1),
4. Use font = Times New Roman 12pt, double-spaced, 1 inch margins. [Am I sounding redundant?]
5. Spacing between paragraphs should be one regular space, in some programs this has to be adjusted.
7. Reference sample in APA format:


Because this journal is a print publication that is available online, it is not necessary to include the web address or date of retrieval in the bibliography. Note that the only capital letters in the article title are the first letter, the first letter of a word following a colon, or the first letter of a proper noun. The journal name and volume number are italicized. The issue number is in parenthesis and is not italicized. The first and last page numbers are listed alone without a heading. Following is a sample bibliographic reference in APA format:

You will choose

A. One of the first three topics (1 or 2 or 3) which is due on September 29

and

B. One of the last two topics (4 or 5) which is due on November 10

1. Assessment or Number Sense
2. Place Value
3. Addition or Subtraction
4. Multiplication or Division
5. Fractions

E. PUPIL STUDY ASSIGNMENT MAE 4310

For this assignment, you are required to conduct a pupil study that follows the guidelines below:

1. Select a Student
   • Choose an individual child or small group of children (max of 3)
   • Must be in grades two through six.
   • You may work with your own child, a neighbor’s child, a relative, or a child at a local school.
2. Select an age/grade appropriate standard from one of these CCSS Domains: Operations and Algebraic Thinking, Number and Operations in Base Ten, or Number and Operations – Fractions.
   - Be sure the standard you select is appropriate for the child you have chosen.
   - Select a high-quality, hands-on activity (you may use any resource available to you) that will develop the concept through the use of a manipulative.
   - If you used any resource other than your own brain to develop your activity, credit your source.
   - The goal is to investigate your student’s thinking and level of understanding regarding your topic through the exploration of the activity.

3. Before you Plan
   - Spend a little time with your student, his/her teacher and/or parents to gain some understanding of your student’s mathematical disposition, general mathematical ability, and understanding of the standard you have chosen.

4. Write and submit a proposal for your pupil study that includes the following (10 pts):
   - The age, grade, and general ability level of your student
   - The number and full text of the CCSS you have chosen
   - A brief description of the lesson you are planning – be sure to describe what manipulatives you will use and how they will be used to develop the concept.
   - A brief description of how you will assess the student’s understanding (assessment ≠ test).

5. Develop a Lesson Plan
   - Develop a lesson plan (USFSM Lesson Planner – available on Canvas under the Files tab) that will be the basis for your pupil study. Be sure to attach all worksheets, handouts, etc.
   - Include ESOL accommodations, even if you do not plan to conduct your lesson with an ESOL child.
   - Based on the grade level, disposition, and/or ability level of the student(s), tailor the activity to adjust for time and ensure that you have opportunity to assess the student’s understanding during and after the planned activity. Plan for the pupil study to last between 45 and 50 minutes. As you develop your plan, you should consider the items listed in the report section of this assignment.

6. Pupil Study Experience
   Conduct your lesson, observe the student(s) reactions and discourse, listen actively, assess mathematical reasoning, ask probing questions for clarification, and expect justification of answers. The goal is for you to determine how the student understands the concept. Before and after the lesson, what is their level of understanding? Be sure to save any work the student has done to show you what they know. Think about how you will know what the student understands. This is to be more of an assessment experience than a teaching experience. Consider audio and video taping the lesson so you have a record of student responses and reasoning. Be sure to obtain permission first.

7. The Report
As soon as possible after the interview, prepare a narrative-style report discussing the lesson, the child’s mathematical reasoning before and after your lesson, and student reactions (i.e. their responses). **Do not provide a transcript of the interview.** This report should be your synthesis of what understanding the student(s) has/have regarding the selected topic. You are to attempt to infer their reasoning based on the responses that were provided. It may be helpful to provide specific dialogue segments to support your thinking.

The report must be typed, double-spaced, Times New Roman 12 point, 1 inch margins, minimum 3 pages, and no more than five pages in length.

**Include the following:**
- A copy of the lesson plan and any worksheets/handouts
- The child’s first name only, grade, age, and any other pertinent information
- Description of the lesson in the body of the report.

**The following will be assessed in the report:**
- Justify that the standard and objective of the lesson were appropriate for the age and ability of the student?
- Describe in narrative style the procedure for conducting the lesson, including at least one modification you would make for ESOL students.
- Describe/name the manipulative/ materials used in the lesson.
- Why was the activity you selected a worthwhile mathematical task?
- How did the questions you asked help you assess your student’s level of understanding?
- How did the learning environment impact the experience?
- How did you anticipate students would respond/react to the lesson? How did this compare to actual responses/reactions?
- What observations were made of the child’s mathematical understanding? What explanations were given? (Sample of student’s work will be helpful.) What diagrams/figures, if any, were made by the child?
- What explanations/conclusions can you make about their mathematical understanding after conducting the lesson?
- What have you learned about lesson planning, teaching, and assessment from this experience?

8. **Due Dates**
   - Pupil Study proposal for feedback: **Oct 27**
   - Report due date: **Nov 24**

**F. PASS/FAIL COURSE REQUIREMENT:**
Content Knowledge Pre Test and Post Test - TBA
PUPIL STUDY RUBRICS
ATTACH THIS SHEET TO YOUR ASSIGNMENT
Course Grade Scoring Rubric

68 – 75 All required elements/topics are present and the specified format is followed. The objective is appropriate for the child’s level, and the lesson plan is well developed and well aligned to the objective. The narrative essay provides evidence that the pupil study was well thought out and well prepared. Writing flows well, observing proper spelling and grammar.

60 – 68 Nearly all required elements/topics are present and the specified format is followed. The objective is appropriate for the child’s level, and the lesson plan generally shows good development and alignment to the objective. The narrative essay shows good preparation and thoughtful evaluation of student understanding. There is fairly good flow, although there may be some awkward areas and some spelling and grammar errors.

53 – 59 Most required elements/topics are present and the specified format is generally followed. The objective is not completely appropriate for the child’s level, and/or the lesson plan is not well planned or not well aligned to the objective. The essay suggests that preparation and post-interview evaluation lacked careful thought. There may be some awkward flow as well as some spelling and grammar errors.

45 – 52 Multiple required elements/topics are missing and/or the specified format is not followed. The objective is not appropriate for the child’s level and/or the lesson is poorly developed or not matched to the objective. The essay does not suggest that careful time was spent in preparation or analysis. The writing is awkward with spelling and grammar errors.

Total Points ________/ 75 possible

Taskstream Rubric

1. Applying concepts from human development and learning theories, the effective educator consistently:

| 1.a. | Aligns instruction with state-adopted standards at the appropriate level of rigor. | ____/5 |
| 1.f. | Develops learning experiences that require students to demonstrate a variety of applicable skills and competencies. | ____/5 |

3. The effective educator consistently utilizes a deep and comprehensive knowledge of the subject taught to:

| 3.c. | Identify gaps in students’ subject matter knowledge; | ____/5 |
| 3.f. | Employ higher-order questioning techniques; | ____/5 |
| 3.g. | Apply varied instructional strategies and resources, including appropriate technology, to provide comprehensible instruction, and to teach for student understanding; | ____/5 |
| 3.j. | Utilize student feedback to monitor instructional needs and to adjust instruction. | ____/5 |

4. The effective educator consistently:

<p>| 4.a. | Analyzes and applies data from multiple assessments and measures to diagnose students’ learning needs, informs instruction based on those needs, and drives the learning process; | ____/5 |
| 4.b. | Designs and aligns formative and summative assessments that match learning objectives and lead to mastery; | ____/5 |</p>
<table>
<thead>
<tr>
<th>DATE</th>
<th>TOPICS</th>
<th>ASSIGNMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug 25</td>
<td>Course Syllabus, Assignments, Teaching with CCS Standards, &amp; What it Means to do Math</td>
<td>Read Chpts 0 and 1</td>
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<tr>
<td>Sept 8</td>
<td>Unpacking the Standards – <strong>Bring computers to class.</strong> CCS Standards for Mathematical Practice</td>
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<td>Sept 15</td>
<td>Chpt 2 – Pathways to Thinking and Problem Solving</td>
<td>Read Chpt 2</td>
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<tr>
<td>Sept 22</td>
<td>Assessment and Begin Chpt 3 – Getting Ready for a Good Beginning</td>
<td>Read Chpt 3</td>
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<tr>
<td>Sept 29</td>
<td>Chpt 3 cont’d – Getting Ready for a Good Beginning: Number Sense</td>
<td><strong>Due:</strong> Website/App assignment</td>
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<tr>
<td>Oct 6</td>
<td>Chpt 4: 100s, 10s, 1s, The Best Yet</td>
<td>Read Chpt 4</td>
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<tr>
<td>Oct 13</td>
<td>Mastering the Basic Facts</td>
<td><strong>Due:</strong> Unpacking the Standards Assignment - Grade 2</td>
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<tr>
<td>Oct 20</td>
<td>Chpt 5 - +/- of Whole Numbers – Constructing Meaning</td>
<td>Read Chpt 5 and Chpt 6</td>
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<tr>
<td>Oct 27</td>
<td>Chpt 7 – x/+ of Whole Numbers – Constructing Meaning</td>
<td>Read Chpt 7 and Chpt 8</td>
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<td>Nov 3</td>
<td><strong>MIDTERM EXAM</strong> - Chpts 0 - 8</td>
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<td>Nov 10</td>
<td>Last day to drop with a “W”, Nov 2 – anyone with failing grade to-date will be notified via email prior to Nov 2</td>
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<tr>
<td>Nov 17</td>
<td>Chpt 9: Some Theory About Numbers (on your own)</td>
<td>Read Chpt 9 and Chpt 10</td>
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<tr>
<td>Nov 24</td>
<td>Chpt 10 – Not All Numbers Are Whole Number</td>
<td><strong>Due:</strong> Journal Article Summary 2</td>
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<td>Nov 27</td>
<td><strong>No Class</strong> - Thanksgiving</td>
<td><strong>Due:</strong> Pupil Study Proposal</td>
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<td>Dec 1</td>
<td>Decimal and Percent Concepts &amp; Computation Ratio and Proportion Concepts &amp; Exam Review</td>
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<tr>
<td>Dec 8</td>
<td><strong>FINAL EXAM</strong> – Comprehensive</td>
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**Comment [PH1]:** I think you will need to figure out how to have the midterm and get students their grades before the drop deadline. One way is to move a topic such as Assessment later. It’s always tough when you miss class due to a holiday to get the midterm done in time for students to drop.