SCHOOL OF EDUCATION AND COUNSELING PSYCHOLOGY

Department of Education
MATTC
EDUC 259B (3 units)
Elementary Mathematics Methods II
Winter

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Course Meeting: **Monday 1:00- 4:00 pm**
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Mission and Goals of the Department of Education
Rooted in the Jesuit tradition at Santa Clara University, the mission of the Department of Education is to prepare professionals of competence, conscience, and compassion who will promote the common good as they transform lives, schools, and communities. Our core values of reflective practice, scholarship, diversity, ethical conduct, social justice, and collaboration guide both theory and practice.

Faculty, staff, and students in the Department of Education:

1. Make student learning our central focus
2. Engage continuously in reflective and scholarly practice
3. Value diversity
4. Become leaders who model ethical conduct and a commitment to social justice
5. Seek collaboration with others in reaching these goals

MS/SS Teaching Credential Program Learning Goals (PLGs)
The PLGs represent our commitment to individuals who earn their MS/SS credential at Santa Clara University. The MS/SS faculty focus on ensuring each student will begin their teaching career ready to:

1. Maximize learning for every student.

2. Teach for student understanding.
3. Make evidence-based instructional decisions informed by student assessment data.
4. Improve your practice through critical reflection and collaboration.
5. Create productive, supportive learning environments.
6. Apply ethical principles to your professional decision-making

The PLGs guide our program. Therefore, all MS/SS teaching credential program course objectives are cross-referenced with the PLGs. (A fully elaborated version of the MS/SS PLGs can be found in the Teacher Candidate Handbook, Pre-Service Pathway.)

Course Description

EDUC260 (Elementary Math Methods) course is Part 2 of a two-course sequence in elementary mathematics teaching methods. This sequence is designed to provide teacher candidates with a coherent set of experiences for mathematics teaching and learning in elementary schools. Through assigned readings, classroom discussions, content rich mathematics activities, and assignments that require data collection in your field placement, you will be supported as you make sense of how to approach the profession of teaching. Through examining classroom culture and structure, and evaluating, designing and implementing math lessons, we will set the stage for our development as elementary mathematics teachers.

Please note: We will adhere to the syllabus as much as possible. However, we are sensitive to the needs of the class, therefore, the syllabus is subject to change.

Course Objectives

This course will develop students' knowledge of or skills with…		*Standard/Goals Addressed*			
		DG #	***PLG #***	***TPE #***	***MMSN TPE #***
1	Examining knowledge, beliefs, and assumptions about mathematics, teaching, and students with particular attention to the impact language, culture, socio-economic status, and identified disabilities have had on mathematical learning opportunities.	2,4	4,6	6.2	1.2, 1.2,

2	Increasing knowledge of mathematics and mathematics pedagogy	2	1	3.1	
3	Increasing theoretical knowledge and practical experience in planning, teaching, and assessing mathematic, with particular attention for how modify teaching to meet the needs of diverse learners while maintaining the cognitive demand of tasks.	1	1, 2, 3	1.5, 1.8, 2.2, 2.5, 4.3, 4.4	1.2, 2.4, 2.8, 3.2, 5.6
4	Understanding the mathematical needs of a diverse range of students including language and funds of knowledge and adopting an asset-based view of students and families, particularly from populations that have traditionally been positioned as low status in mathematics classrooms including students with identified disabilities .	1, 3	1, 2, 5	1.1, 1.3, 1.6, 3.2, 3.4, 7.1., 7.4, 7.11	1.2, 1.7, 2.4, 3.2, 4.7
5	Understanding the complexities of diverse, multiply-ability classrooms while broadening your repertoire of teaching techniques to engage and assess all students, including students with identified disabilities, in rich, complex, and multi-dimensional mathematics.	1,3	1, 5	1.1, 1.6, 2.2 3.2, 4.4	1.1, 1.4, 2.4, 3.1, 3.2, 4.2
6	Learning how to modify existing curriculum to create mathematical learning experiences for **ALL** students including students with identified disabilities that have multiple entry points, multiply strategies, address language needs, and are relevant and relatable.	1	1, 2 ,5	1.6, 1.8, 2.5, 3.2, 5.1, 5.2. 7.1, 7.4, 7.9, 7.11	1.1, 1.2, 1.7, 2.1, 2.8, 2.9, 2.10, 3.2, 4.2, 5.1, 5.6, 7.4
7	Learning from experiences in schools through informed reflection.	2	4	6.1	4.3, 5.2

*DG=Department Goals; PLG=Program Learning Goal; TPE=Teaching Performance Expectation Standard; TPA=Teaching Performance Assessment					

This course is not designed to turn you into an expert mathematics teacher. Instead, it aims to help you become a "well-started novice": a prospective teacher who has thought hard about some of the central questions in mathematics teaching; who has ideas about these questions that she or he can defend articulately; who knows a bit about the practical side of mathematics teaching and about resources available to teachers; and who has the skills, the confidence, and the curiosity to learn from teaching and from the other opportunities for learning that lie ahead.

Required Texts

All required readings will be posted on Camino. **All readings should be completed prior to each class meeting.**

Course Requirements/Assignments

	Course/Requirements/Assignments	Points	TPE Assessed	*MMSN TPE#*
1	Well Remembered Event	20	6.2	
2	Community Based Math Lesson	90	1.1, 1.3, 1.5,2.2, 3.1,4.4,6.1, 6.2	1.2, 1.7, 2.4, 2.8, 2.9, 2.10, 3.1, 3.2, 4.2,4.3, 4.7, 5.2
3	Discussion Posts related to Community Based Field Work	10	4.4,6.1	
4	Literature Based Math Lesson	80	1.5,1.8,3.1, 3.4 4.3,6.2, 7.1, 7.4, 7.9, 7.11	1.2, 1.7, 2.8, 2.9. 2.10,3.1 3.2, 4.2, 4.3, 4.7, 5.2, 7.4

5	Task Analysis, Modification, and Anticipation	10	1.6,1.8,2.5, 3.2, 5.1, 5.2	1.1, 1.2, 1.4,1.7, 2.1, 2.8, 2.9, 2.10, 3.1, 3.2, 4.2, 4.3, 4.7, 5.1, 5.6

Assignment 1: Well Remembered Event. This is a three-part paper that includes a description of a specific mathematics event; an account of why the mathematics event was memorable; and a section discussing what impact this mathematics event might have on your understanding of what it means to be a teacher.

Assignment 2: Literature Based Math Lesson. The purpose of this assignment is for students to learn how to use literature in mathematics lessons to teach mathematics concepts and to make connections in these two important content areas. Students learn how to use high-quality literature to develop an integrated curriculum in mathematics to offer another strategy for helping students to develop their mathematical understanding. Monitoring of student learning will be expected with modifications made for students as needed. Particular attention will focus on creating a LMBL that addresses the mathematics learning needs of students that address and create asset based optimal learning experiences around language, culture, socioeconomic status, and identified disabilities.
Practice and Assess MMSN 1.2, 1.4, 1.7, 2.4, 2.8, 2.9. 2.10, 3.1, 3.2, 4.2, 4.3, 4.7, 5.2. 7.4
Practice UTPE: 1.6, 1.8; Practice and Assess UTPE: 1.3, 1.5, 2.2, 3.2, 4.3, 7.1, 7.4, 7.9, 7.11

Assignment 3: ***Signature Assignment****:* Community Based Math Lesson. The purpose of this assignment is to deepen your knowledge about mathematics teaching, your students, and the local community (or communities) that your school serves by closely examining and documenting mathematical resources that can be used for mathematics lesson planning purposes. This assignment requires you to collaborate with the teachers and other educators at your school as well as the parents of your students. The primary goals are to:
- To increase your knowledge of students' communities, including the knowledge and expertise of family and community members.
- Reflect on what you learned about the community as a mathematical resource and how it might support your mathematics instruction.

- Pay particular attention to the assets that families and their communities possess for students with disabilities.

- Consider various ways to organize, represent and display authentic, real-world data that is gathered from your community investigations.
Practice and Assess MMSN 1.2, 1.7, 2.4, 2.8, 2.9, 2.10, 3.1, 3.2, 4.2, 4.3, 4.7, 5.2
Practice and Assess UTPE: 1.1., 1.3, 2.2, 3.4

Assignment 4: Discussion Posts Related to Community Based Math Lesson. Discussions between students will focus on learning that occurred during the community visits.

Assignment 5: Task Analysis, Modification, and Anticipation. The purpose of this assignment is to learn how to adapt and assess tasks in mathematics curriculum to have multiple entry points, multiple strategies, offer students the opportunity to share their thinking and support connections to students' family, cultural, or community knowledge and language. In modifying the task you will write a set of multi-dimensional learning objectives and identify modifications and supports for ELs and students with identified disabilities that do not lower the cognitive demand of the mathematical task and that help to create positive mathematical attitudes and behaviors.
Practice MMSN 1.1; Practice and Assess MMSN 1.1, 1.2, 1.4, 1.7, 2.1, 2.8, 2.9, 2.10, 3.1, 3.2, 4.2, 4.3, 4.7, 5.1, 5.6
Introduce and Practice UTPE: 5.2; Practice and Assess UTPE: 1.1, 1.3, 2.2, 3.2, 3.4, 4.3, 5.1

Regular attendance at **all** class meetings is a requirement in this program. **Ten points** will be deducted from your final grade for the course for each class session you missed. Each of you will be granted one Emergency Release (ER) per course. Your ER excuses you from one class session with half the grade penalty (loss of 5 points instead of 10). To use your ER you must notify me by email or phone **BEFORE** class. Save your ER for medical issues, family demands, car trouble, etc.

Students will not be penalized for absences due to the observance of religious holidays that fall on our scheduled class day; please give me advance notice of these absences so I can make the necessary accommodations. All other absences are unexcused and will affect your grade.

Punctuality. Coming to class (and returning from breaks) on time is another course requirement. Your first lateness will be excused; your second lateness will cause 1 point to be deducted from your final course grade; your third lateness will cause an additional 4 points to be deducted. More than three late arrivals indicate a serious problem; this situation will be dealt with at the instructor's discretion. Attendance and punctuality are the only policies with the immediate potential to impact your course

grades. Your instructor through ongoing observation and documentation gathers data documenting your adherence to the remaining policies listed here.

If an instructor has reason to feel you are not meeting all the expectations spelled out below, s/he will contact you privately to discuss the issue, to clarify the expectations as needed, and to offer his/her support in helping you reach those expectations. If your instructor does not contact you with a concern, you can assume you are satisfying these requirements. However, if you would like specific feedback on your professional conduct during the quarter, you are welcome to contact your instructor at any time and s/he will be glad to share his/her assessment with you.

As we will read about and study in this course, everyone's learning is enhanced by the quantity and quality of the interactions in the learning environment. Hence, your participation in whole class discussions, group work and pair group is essential for the success of this course.

While a class is in session, you should not engage in any activity not directly related to what is taking place in the classroom. Instructors reserve the right to ask you to close your laptop or put away some other form of technology at their discretion; when/if this occurs, please respond quickly and without protest to avoid further disruption of the class's learning. Instructors also reserve the right to ignore your inappropriate use of technology in class and simply deduct points from your final grade. If you would like more detailed clarification about the expectations regarding appropriate and inappropriate in-class technology use, please feel free to contact your instructor for further information.

Assessments & Grading Criteria

1. All written and oral assignments must reflect graduate-level standards. As a future teacher, you must be able to model communication skills for your students.

2. Attendance and participation in all class meetings is required. If you are going to be absent from class, you must email or call me to inform me of your absence. You will still be responsible for all missed content and in-class work.

3. Letter grades are assigned on the standard scale based upon a possible total of 100 points.

A	94-100	**C+**	77-79
A-	90-93	**C**	74-76

B+	87-89	**C-**	70-73
B	84-86	**D+**	67-69
B-	80-83	**D**	63-66

4. Assignments done in partners/pairs, both partners will receive the same grade, unless otherwise stated.

5. Final grades will reflect students' contributions (e.g., attendance, class discussions, quality of presentation, ability to lead discussion groups, completion and quality of course assignments), critical thinking and ability/degree to which student integrates theory, research and practice.

6. All assignments are expected on their due dates in the room where our class meets. I cannot be responsible for papers submitted at other times or in other formats. Unless we have made special arrangements beforehand, late assignments will be docked 3 points for each day past the due date that they are submitted.

Canvas/Camino Course Management System
To access course materials and participate in On-line activities, please be sure to review Canvas (also known as Camino). Reminders, tools, readings and assignment descriptions will be made available through this on-line course management system. Your SCU username and password gets you access to Canvas.

Disability Accommodations Procedure
If you have a disability for which accommodations may be required in this class, please contact Disabilities Resources, Benson 216, http://www.scu.edu/disabilities as soon as possible to discuss your needs and register for accommodations with the University. If you have already arranged accommodations through Disabilities Resources, please discuss them with me during my office hours. Students who have medical needs related to pregnancy may also be eligible for accommodations.

While I am happy to assist you, I am unable to provide accommodations until I have received verification from Disabilities Resources. The Disabilities Resources office will work with students and faculty to arrange proctored exams for students whose accommodations include double time for exams and/or assisted technology. (Students with approved accommodations of time-and-a-half should talk with me as soon as possible). Disabilities Resources must be contacted in advance to schedule

proctored examinations or to arrange other accommodations. The Disabilities Resources office would be grateful for advance notice of at least two weeks. For more information, you may contact Disabilities Resources at 408-554-4109.

Accommodations for Pregnancy and Parenting
In alignment with Title IX of the Education Amendments of 1972, and with the California Education Code, Section 66281.7, Santa Clara University provides reasonable accommodations to students who are pregnant, have recently experienced childbirth, and/or have medically related needs. Pregnant and parenting students can often arrange accommodations by working directly with their instructors, supervisors, or departments. Alternatively, a pregnant or parenting student experiencing related medical conditions may request accommodations through Disability Resources.

Discrimination and Sexual Misconduct (Title IX)
Santa Clara University upholds a zero-tolerance policy for discrimination, harassment and sexual misconduct. If you (or someone you know) have experienced discrimination or harassment, including sexual assault, domestic/dating violence, or stalking, I encourage you to tell someone promptly. For more information, please consult the University's Gender-Based Discrimination and Sexual Misconduct Policy at http://bit.ly/2ce1hBb or contact the University's EEO and Title IX Coordinator, Belinda Guthrie, at 408-554-3043, bguthrie@scu.edu. Reports may be submitted online through https://www.scu.edu/osl/report/ or anonymously through Ethicspoint https://www.scu.edu/hr/quick-links/ethicspoint/

Academic Integrity
The University is committed to academic excellence and integrity. Students are expected to do their own work and to cite any sources they use. A student who is guilty of dishonest acts in an examination, paper, or other required work for a course, or who assists others in such acts, will receive a grade of F for the course. In addition, a student guilty of dishonest acts will be immediately dismissed from the University. Students that violate copyright laws, including those covering the copying of software programs, or who knowingly alter official academic records from this or any other institution, are subject to disciplinary action (ECP Graduate Bulletin, 2013-2014).

Course Outline & Class Schedule ***Course Plan Subject to Change***

Course Meeting	Course Topics	Course Readings	Course Assignments
Session 1 Mon Jan 6th	Big Ideas Learning Objectives Lesson Plan Designs	Wiggins & McTighe. Understanding by Design. Chapter 1. Thinking Through the Lesson Plan (Stein & Smith) Practice MMSN 1.1 Practice UTPE 1.8, 3.2	**Assignment:** Well Remembered Event (WRE) ***Due Jan 12th by 11pm on Camino*** **Assignment:** Pick a picture book and bring to class next week
Session 2 Mon Jan 13th	Unpacking the CCSS for Mathematics Literature Based Math Lesson (LBML)	Harrington (2017) Understanding the CCSS in CA: A Quick Guide You will be assigned to read one of the following**:** Ducolon, C. (2000); Silverman et al. (2001); Young, E. and Marroquin, C. (2006); Whitin, 2008; Iliev & D'Angelo 2014; or Reynolds et al., 2006 TPE 7.1, 7.4, 7.9	Bring a hard copy or electronic copy of your WRE to class Bring a picture book **Assignment:** Small group lesson implementation of literature based lesson plan TPE 7.1, 7.4, 7.9

Session 3 Mon Jan 20th **Online Class**	Cognitive Demand Lesson Plan Designs Literature Based Math Lesson	Stein, M. K., Smith, M. S., Henningsen, M. A., & Silver, E. (2000). Implementing standards-based mathematics instruction. Introduction and Chps 1 & 2.	**Due Jan 25th by 11pm on Camino:** Small group literature based lesson plan draft
Session 4 Mon Jan 27th	Literature Based Math Lesson Teaching for Social Justice - Getting to Know Your Students, Their Families, and Communities (Part 1) Task Selection, Modification & Adaptation	Peterson, B. (2005). Teaching math across the curriculum You will be assigned one article related to social justice and/or knowing your community. Practice UTPE 1.1, 1.3 Lambert, R. (2018) "Indefensible, Illogical, and Unsupported": Countering Deficit Mythologies about the Potential of students with Learning Disabilities in Mathematics.(Introduce MMSN 2.1, 2.9, 3.1, 5.1,	**To be completed & posted by Jan 31st on Camino:** Task Modification/Adaptation of Math Curriculum

Session 5 Mon Feb 3rd	Literature Based Math Lesson Presentations Teaching for Social Justice - Getting to Know Your Students, Their Families, and Communities (Part 2)	Bartell et al. (2017) Connecting children's mathematical thinking with family and community knowledge in mathematics instruction Practice: MMSN 2.4 Practice UTPE 1.1, 1.3 Civil & Kahn (2001) Mathematics Instruction Developed from a Garden Theme Practice: MMSN 2.4 Practice UTPE 1.1, 1.3	**Due in Class:** Literature Based Math Lesson Presentations **Due Feb 7th by 11pm:** **LBML:** Final Copy of Literature Based Lesson Plan and Individual Reflection Write Up **Assignment:** Have conversation with students about places they go in their community and take notes
Session 6 Mon Feb 10th	Introduction to the Community Based Math Lesson Parent Panel Understanding Student Thinking: Fractions	Empson, S. (1995). Fractions. Equal Sharing – Student Strategies from Cognitively Guided Instruction Taber & Canonica (2008). Special Ed Students Investigate Division/Sharing Practice MMSN 1.1, 1.4, 1.7,	**Due in Class:** Notes about conversation with students about places they go in their community

Session 7 Mon Feb 17th	**** Fieldwork Week – Visiting community sites with your Community Based Mathematics Lesson Group**		**Due Feb 23rd by 11pm:** Discussion posting and response to community based fieldwork on Camino. *Include two pictures with whole group at your two community sites. Pictures can be emailed*
Session 8 Mon Feb 24th	Talk Moves Assessing Student Thinking – Evaluating Student Work and Giving Feedback, Rubrics Work time Community Based Math Lesson	Chapin et al. (2003). The tools of classroom talk (Chapter 2). TD Chapter 5 - Building Assessment into Instruction. pp. 78-92. Practice UTPE 4.3 Black et al. (2004). *Working inside the black box.*	

Session 9 Mon March 2nd	Task Launch Work time on Community Based Math Lesson Special Education in Mathematics	Jackson et al. (2012). Launching Complex Tasks	**Assignment:** Bring math app(s) and or game(s) next week
Session 10 Mon March 9th	Community Based Math Lesson Presentations Technology + Apps + Games Final Course Reflection	Gee, J. (2007). Good video games and good learning.	**Due in Class:** Community Based Math Lesson Presentations **Due in class:** Bring math app(s) and or game(s) **Due on Camino March 13th:** Community Based Math Lesson Projects and Individual Reflection

Assignment Excerpts with MMSN additions:
Assess MMSN 1.1, 1.2, 1.4,1.7, 2.1, 2.8, 2.9, 2.10, 3.1, 3.2, 4.2, 4.3, 4.7, 5.1, 5.6
Modification of Task Assignment Requirements
on of Task Assignment

Step 3. Modify a "small" formative assessment (e.g., warm up or exit ticket, classwork, etc.). (10 points) Be sure to include a self-assessment component.	What was the original task? (1 point)
	What is the modified task? (1 point)
	Describe what you did to modify the task and explain why you made the modifications. (2 points) (2-4 sentences)
	Describe modifications for the task ELs and students with identified disabilities and explain how such modifications maintain cognitive demand. (4 points) Practice and Assess MMSN 1.1, 1.2, 1.4,1.7, 2.1, 2.8, 2.9, 2.10, 3.1, 3.2, 4.2, 4.3, 4.7, 5.1, 5.6 Introduce and Practice UTPE: 5.1., 5.2; Practice and Assess UTPE 1.1, 1.3, 2.2, 3.2, 3.4, 4.3
	Solve the task. Identify alternative solution strategies you anticipate might surface. Identify potential challenges, misconceptions, or errors you anticipate might surface. (2 points)

Step 4. Assess students. (5 points)	Design grading/feedback criteria for your task (e.g., points, rubric, etc.). Include criteria below. (4 points)

	Facilitate your task with at least 10 students, including an EL student and student with an identified disability. Assessing the whole class is fine. Collect all student work on the assessment. (1 point) Practice and Assess MMSN 1.1, 1.2, 1.4,1.7, 2.1, 2.8, 2.9, 2.10, 3.1, 3.2, 4.2, 4.3, 4.7, 5.1, 5.6 Practice and Assess UTPE: 1.1, 1.3, 2.2, 3.2, 3.4, 4.3

Step 5. Analyze and interpret your students' work on this assessment (9 points). *Make sure to reference specific evidence from student work samples.* You should include selections of specific student work in your analysis. Your analysis of the assessment should take into account both patterns that appear over the whole class *and* what you learn from individual students. You do not need to analyze all of the students in your study individually—*choosing two or three is fine*. You should identify patterns worth noting, and ones that should inform your teaching. For example, you might notice that about half of the students make a common mistake. You might also notice that one student had a particularly novel approach to solving a problem, or that you have an exciting insight into how a student understands a concept. Misconceptions are rich opportunities that can inform exciting teaching and learning moments.	Describe the patterns you notice across the student work in relation to each of your learning objectives. (3 points) 1. What areas of strength do you notice? (2-4 sentences) 2. What are students still struggling with? (2-4 sentences)
	How would you describe the progress of the students toward achieving the learning objectives? Be sure to specifically address progress of an EL student and a student with and identified disability (4 points) (2-4 sentences) Assess MMSN 1.1, 1.2, 1.4,1.7, 2.1, 2.8, 2.9, 2.10, 3.1, 3.2, 4.2, 4.3, 4.7, 5.1, 5.6 Assess UTPE: 1.1, 1.3, 2.2, 3.2, 3.4, 4.3

	What did you learn about your students from the self/peer assessment part of your task? (2 points) (2-4 sentences)

Step 6. Adjust Instruction: (4 points)	Based on what you learned about the students on this assessment, what might they need next? Describe 2-4 *specific* next steps that you might take as a teacher to support the students to move forward. Be sure to specifically address next steps for an EL student in your class and for a student with an IEP in your class. Assess MMSN 1.1, 1.2, 1.4,1.7, 2.1, 2.8, 2.9, 2.10, 3.1, 3.2, 4.2, 4.3, 4.7, 5.1, 5.6 Assess UTPE: 1.1, 1.3, 2.2, 3.2, 3.4, 4.3

Modification of the Literature Based Math Lesson Requirements

The purpose of this assignment is for students to learn how to use literature in mathematics lessons to teach mathematics concepts and to make connections in these two important content areas. Students learn how to use high-quality literature to develop an integrated curriculum in mathematics to offer another strategy for helping students to develop their mathematical understanding. Monitoring of student learning will be expected with modifications made for students as needed. Particular attention will focus on creating a LMBL that addresses the mathematics learning needs of students that address and create asset based optimal learning experiences around language, culture, socioeconomic status, and identified disabilities.

Assess MMSN 1.2, 1.7, 2.8, 2.9. 2.10,3.1, 3.2, 4.2, 4.3, 4.7, 5.2, 7.1, 7.4, 7.9.
Assess UTPE: 1.3,.2.2, 3.2, 4.3, 7.4, 7.11

Reflection (20 points)

You can either write up your reflection in a 4-6 page double spaced paper or record your responses in an audio file. Address the following questions in your reflection:

1) General reflection: how did the lesson go? What things went well? What things did not go so well? Why do you think so? To what extent did the book enhance the lesson? How did the book impact student engagement? Student understanding?

2) The task: To what extent did you choose a worthwhile mathematical task? Was it clear? Did it allow students to investigate the mathematical concepts that you wanted to focus on in the lesson? Did it have multiple entry points for all learners, including language learners and students with identified disabilities? Assess MMSN 1.2, 1.7, 2.8, 2.9. 2.10,3.1
Practice UTPE 1.6; 1.8; Assess UTPE: 1.1, 1.3, 2.2, 3.2, 3.4, 4.3

3) Student's mathematical understanding: What did you learn about the students' thinking? What did they understand about the math concepts? What seemed to help them understand? What was hard for them to understand about the concept? Why do you think it was hard? How would you describe the mathematical understanding of language learners and students with identified disabilities? Assess MMSN 1.2, 1.7, 2.8, 2.9. 2.10,3.1; Practice/Assess: 7.4
Practice UTPE 1.6; 1.8; Assess UTPE: 1.1, 1.3, 2.2, 3.2, 3.4, 4.3; Practice/Assess: 7.1, 7.4, 7.9

4) Your role in facilitating mathematical understanding: What did you do to facilitate student's mathematical understanding and how did it work? What kinds of things did you notice yourself doing during the lesson to support, clarify, and extend students' thinking? How did you share mathematical conventions, alternate strategies, or help students to better articulate the ideas in their methods? How did you support diverse groups of learners, including language learners and students with disabilities? Practice and AssessMMSN 1.2, 1.7, 2.8, 2.9. 2.10,3.1, 7.4,
Practice UTPE 1.6; 1.8; Assess UTPE: 1.1, 1.3, 2.2, 3.2, 3.4, 4.3; Practice/Assess: 7.1, 7.4, 7.9

5) Improvements or adaptations for the future: Based on what happened in this lesson, what changes do you think you might have to make to the next lesson? Why do you think you need to make those changes? What would you do differently if you taught this lesson again? Be sure to address specific adaptations including language learners and students with disabilities? Practice and Assess MMSN 1.2, 1.7, 2.8, 2.9. 2.10,3.1
Practice UTPE 1.6; 1.8; Assess UTPE: 1.1, 1.3, 2.2, 3.2, 3.4, 4.3

6) Teaching of mathematics: How did this assignment help you to grow as a mathematics teacher? What did you feel the most confident/challenged about when preparing/teaching this lesson, as it relates to all students including language learners and students with disabilities? Practice and Assess MMSN 1.2, 1.7, 2.8, 2.9. 2.10,3.1