Course Title: ELE 3400-006 
Call Number: 23557

Mathematics Instruction: PREPMY-9

Course Credit: 3 Semester Hours

Term/Year: Winter 2014

Course Location: 200 College of Education

Time/Day: 4:30 p.m. – 7:15 p.m. Thursdays

Instructor(s): Libby Pizzo

Office: Wayne RESA’s Mathematics and Science Center, 33500 Van Born Road, Wayne
Appointments/Walk-ins: Before and after class or by appointment
Office Phone: 734.334.1375 E-mail: pizzol@resa.net
FAX Number: 734.334.1411
Website: http://www.resa.net/curriculum/curriculum/math/

Course Description:
Introduction. This is an introductory course designed to help you begin teaching mathematics. Our focus in this course will be on helping you use a number of instructional activities that are central to the content in elementary/middle school mathematics that are deeply embedded in the curriculum. Teachers’ mathematical knowledge is important for students’ achievement. Therefore, you will have an opportunity to demonstrate a variety of the mathematics activities that are supported and anchored in commitments to high-quality mathematics instruction expressed by mathematics education policy documents such as the National Council of Teachers of Mathematics Principles and Standards of Teaching Mathematics (2000), the National Mathematics Advisory Panel (2008) and the Common Core State Standards Initiative for Mathematics (2010). By learning to “do” these instructional activities well, you will learn a good deal of the mathematical content that matters for teaching elementary mathematics, but you will also learn how to listen to your colleagues ideas, and how to adjust your teaching in response. Your knowledge of mathematics, your ability to represent ideas and hear others’ understandings of them, your skill in using mathematical tools like drawings, symbols, number lines, and your facility with language all matter greatly in teaching mathematics, and they will be practiced in the context of this course.

Course content will be explored through readings, course assignments, videos, cooperative group/hands-on activities, whole and small group discussions and/or independent assignments using online resources.

Course Objectives:

The student as an innovative and reflective urban educator will:

1. Explore and analyze appropriate mathematics content.
2. Become familiar with the NCTM’s Principals and Standards for School Mathematics, the Common Core State Standards for Mathematical Content and the 8 Standards for Student Mathematical Practice.
3. Critically evaluate and reflect upon teaching materials, strategies, and ideas.
4. Develop an awareness of professional journals, organizations and resources that support mathematics instruction through reflective research.
5. Gain a better understanding of classroom organization and planning for mathematics instruction:
• Broaden scope of understanding of a variety of assessment practices.
• Experience a variety of methods for teaching mathematics including the use of manipulatives, small group and whole group instruction, and "good" questioning strategies.
• Develop four key aspects of teaching mathematics:
  ➢ The nature of math as the science of pattern, order and relationships
  ➢ An understanding of how children learn mathematics
  ➢ A problem-solving view of teaching mathematics
  ➢ Specific methods for integrating assessment with instruction

Required Text:

References:

Teachers’ mathematical knowledge is important for students' achievement. The preparation of elementary and middle school teachers in mathematics should be strengthened. Teachers cannot be expected to teach what they do not know.

http://balancedassessment.concord.org/
Balanced Assessment

www.corestandards.org  Official site for CCSS
The Common Core State Standards (CCSS) for K-12 English Language Arts and Mathematics were developed by a state-led coordinated effort in collaboration with teachers, school administrators, and experts to provide a clear and consistent framework to prepare our children for college and the workforce.

http://www.livebinders.com/play/play/187117
Common Core State Standards Mathematics Live binder keeps math educators up-to-date on CCSS-M information and math resources for curriculum, instruction, and assessment. This regularly updated well-organized binder has an excellent collection of websites containing unpacked and clarified standards, mathematical tasks, unit and lesson planning resources, SBAC assessment updates, and much more!

http://www.dactm.org/
DACTM

www.illustrativemathematics.org  
Illustrative Mathematics Project provides guidance to states, assessment consortia, testing companies, curriculum developers, teachers, and administrators. The project has high quality, rigorously math tasks to illustrate the range and type of mathematical work that students will experience in a faithful implementation of the Common Core State Standards.
Inside Mathematics supports CCSS implementation by providing K-12 classroom examples of innovative teaching methods and insights into student learning; rich mathematical tasks; reflective videos demonstrating each of the eight Mathematical Practices; demonstration lessons; and math teaching tools.

The Math Forum

MCTM

M.E.A.P. Mathematics Information

NCSM Great Tasks for Mathematics is a collection of tasks that can be easily used in the teacher’s math lesson plan (K-12). Each task includes teacher notes, the Common Core State Standards and Mathematical Practices alignment, an activity launch, a core task, and extension activities. All tasks are expected to be completed by the end of 2012.

NCTM

Elementary Resources: http://www.nctm.org/resources/elementary.aspx
Middle School Resources: http://www.nctm.org/resources/middle.aspx
High School Resources: http://www.nctm.org/resources/high.aspx

Think Math interprets and illustrates each of the eight Mathematical Practices as they might be exemplified in grades K–5. The intent is that these essential mathematical habits of mind and action pervade the curriculum and pedagogy of mathematics in age-appropriate ways.

Mathematics Materials and Resources

| Carnegie Learning | 888.851.7094 |
| Delta Education   | 800.258.1302 |
| Didax Educational Resources | 800.458.0024 |
| EAI Education    | 800.770.8010 |
| ETA hand2mind    | 800.445.5985 |
| Heinemann        | 800.541.2086 |
| Marcy Cook Materials | http://www.marcycookmath.com/ |
| McGraw-Hill      | 800.624.0822 |
| NASCO (formerly Summitt Learning) | 800.777.8817 |
| Pearson          | 800.237.3142 |
| Texas Instruments| 800.ti.cares |
**Favorite Places to Shop**

**LOCAL**  
**DEALER DISCOUNT CRAFTS**  
http://www.discountcraftsandflorals.com/  
8199 E. 10 Mile Road  
586.757.2690  
Craft Supplies - Discounts  
increase the more you buy

**THE NOVELTY HOUSE**  
http://www.smalltoys.com/  
586.997.9231 (for pickup of online order if not being delivered)  
Novelties and Bingo Supplies  
Ask about 10% teacher discounts

**THE SCRAP BOX**  
http://scrapbox.org/wordpress1/  
581 State Circle  
734.994.4420 or 734.994.0012  
Hours: Tuesday – Friday, 10:00 p.m. – 5:00 p.m.  
Saturday 10:00 a.m. - 2:00 p.m.

Class Policies:

1. Unless a due date is changed, you must turn the assignment in on (or before) the date it is due. Twenty percent of the grade points assigned will be deducted for assignments which are submitted after the due date. **Assignments that are not turned in will be recorded as a zero.**
2. All written assignments submitted in fulfillment of course requirements must be typed neatly and accurately. Remember to note the source of ANY materials (books, curricular guides, text, internet) that you use.
3. **Binder:** You will maintain a binder where you will organize your course documents, writings, and assignments.
4. Regular and punctual attendance and active participation during class is expected. You are expected to attend all class sessions. Excessive absenteeism or tardiness can result in the lowering of your grade (absent or tardy for more than 10% of class sessions). You are expected to complete all assignments on time and be prepared to share work in class. Attendance and participation in class, on group (or individual projects and/or virtually will be considered in assignment of grades. Please note that there is a distribution of grades from A – F within the College of Education and that plusses and minuses are recorded and distinguish distinct grade point averages. You may request a withdrawal from the class at any point from the fifth week of class through the study day to receive a grade of WP, WF, or WN. For more information, go to: [http://reg.wayne.edu/students/policies.php](http://reg.wayne.edu/students/policies.php).
5. **Plagiarism:** Plagiarism includes copying material (any more than 3-5 consecutive words) from outside texts or presenting outside information as if it were your own by not crediting authors through citations. It can be deliberate or unintended. If you’re in doubt about the use of a source, cite it. Students caught plagiarizing information from other sources will receive a failing grade in the course. University policy states that students can be subject to multiple sanctions, from reprimand to expulsion as a consequence of academic dishonesty. To enforce this policy, all outside references must be submitted with assignments. Please refer to the information on plagiarism at the following website: [http://www.indiana.edu/~wts/wts/plagiarism.html](http://www.indiana.edu/~wts/wts/plagiarism.html)
6. **Attention Students with Disabilities:** Wayne State University is committed to providing students with disabilities and equal opportunity to benefit from its programs, services, and activities. If you have a disability that limits your participation in class in any way, please inform me and alterations in the course will be made. All printed materials are available in alternative formats. If you feel that the limitations imposed by your disability will interfere with your ability to successfully fulfill the requirements of this course, you are strongly encouraged to contact the Student Disability Services (SDS) office located at 1600 David Adamany Undergraduate Library in the Student Academic Services department to request an accommodation at 313.577.1851 or 313.577.3365 (TTY: telecommunication device for the deaf: phone for hearing impaired students only). Once you have your accommodations in place, I will be glad to meet with you privately during my office hours to discuss your special needs. Please refer to the SDS website for further information about students with disabilities and the services provided for faculty and students, http://studentdisability.wayne.edu.

7. **Religious Observance Policy:** Because of the extraordinary variety of religious affiliations represented in the University student body and staff, the Wayne State University calendar makes no provision for religious holidays. It is University policy, however, to respect the faith and religious obligations of the individual. Students who find that their classes or examinations involve conflicts with their religious observances are expected to notify their instructors well in advance so that alternative arrangements as suitable as possible may be worked out.

8. **Withdrawal Policy:** Students who withdraw from a course after the end of the 4th week of class will receive a grade of WP, WF, or WN.
   - WP will be awarded if the student is passing the course (based on work due to date) at the time the withdrawal is requested
   - WF will be awarded if the student is failing the course (based on work due to date) at the time the withdrawal is requested
   - WN will be awarded if no materials have been submitted, and so there is no basis for a grade

   Students must submit their withdrawal request on-line through Pipeline. The faculty member must approve the withdrawal request before it becomes final, and students should continue to attend class until they receive notification via email that the withdrawal has been approved. Withdrawals can be requested at any point from the fifth week of class through the study day.

9. **Class communication will utilize WSU’s student user ID (e.g., aa1104@wayne.edu).** Unless you use your WSU user ID as your email, you will miss any communication sent to you using such email. You may connect your WSU email to another email address by going to http://webmail.wayne.edu, click on “Options” and then on “Forwarding.” Enter the email address that you want your WSU email to be forward to and click on “Start.” Email will be the primary source of communication with students when class is not in session - students need to check their WSU email regularly.

10. **During the semester, students are encouraged to work cooperatively with other students, except during assessments.** The development of a student’s power to use mathematics involves learning the signs, symbols and terms of mathematics. This is best accomplished in problem situations in which students have an opportunity to read, write, and discuss ideas in which the use of the language of mathematics becomes natural. As students communicate their ideas, they learn to clarify, refine, and consolidate their thinking, (Curriculum and Evaluation Standards for School Mathematics).

11. **University Policy, General Note on Grading**
   The College of Education faculty members strive to implement assessment measures that reflect a variety of strategies in order to evaluate a student's performance in a course. For undergraduates and post-degree students C grades will be awarded for satisfactory work that satisfies all course requirements; B grades will be awarded for very good work, and A grades will be reserved for outstanding performance. Please note that there is a distribution of grades from A-F within the College of Education and pluses and minuses are recorded and distinguish distinct grade point averages. An incomplete grade for this course is not an option. You will need to make every effort to complete all assignments/assessments.
**Evaluation and Grading:**
Grades for this course will be based on reading reflections, issues and perspectives project, portfolio, class/virtual participation/preparation and assessments. The following point scale will be used:

<table>
<thead>
<tr>
<th>ASSIGNMENT</th>
<th>NUMBER OF POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Learning Logs (3 TOTAL)</td>
<td>30</td>
</tr>
<tr>
<td>2. Reading Reflections (3 @ 5 points each)</td>
<td>15</td>
</tr>
<tr>
<td>3. Adjusting Mathematical Language to the Common Core</td>
<td>15</td>
</tr>
<tr>
<td>4. Preparation and Participation (Includes Class Attendance, Blackboard/Virtual Participation)</td>
<td>10</td>
</tr>
<tr>
<td>5. Virtual Activity Report #1</td>
<td>20</td>
</tr>
<tr>
<td>6. Virtual Activity Report #2</td>
<td>20</td>
</tr>
<tr>
<td>7. Final Exam</td>
<td>30</td>
</tr>
</tbody>
</table>

**TOTAL POINTS:** 140

In determining course grades, the following grading scale will apply (**Extra credit points are not included**):

<table>
<thead>
<tr>
<th>NUMBER OF POINTS EARNED</th>
<th>CORRESPONDING LETTER GRADE AND PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>133 - 140</td>
<td>A (95% - 100%)</td>
</tr>
<tr>
<td>126 - 132</td>
<td>A- (90% - 94%)</td>
</tr>
<tr>
<td>122 - 125</td>
<td>B+ (87% - 89%)</td>
</tr>
<tr>
<td>118 - 121</td>
<td>B (84% - 86%)</td>
</tr>
<tr>
<td>112 - 117</td>
<td>B- (80% - 83%)</td>
</tr>
<tr>
<td>108 - 111</td>
<td>C+ (77% - 79%)</td>
</tr>
<tr>
<td>103 - 107</td>
<td>C (74% - 76%)</td>
</tr>
<tr>
<td>98 - 102</td>
<td>C- (70% - 73%)</td>
</tr>
<tr>
<td>94 - 97</td>
<td>D+ (67% - 69%)</td>
</tr>
<tr>
<td>90 - 93</td>
<td>D (64% - 66%)</td>
</tr>
<tr>
<td>84 - 89</td>
<td>D- (60% - 63%)</td>
</tr>
<tr>
<td>0 - 83</td>
<td>F Below 60</td>
</tr>
</tbody>
</table>

**Learning Log:**

Each student will be asked to keep a learning log to reflect upon the experiences of **THREE** class sessions and to record thoughts regarding any assigned articles or other readings. Learning Log responses can include, but are not limited to, personal reflections, ideas and strategies as they relate to the teaching and learning of mathematics. Learning Logs are due on **April 17, 2014**. Use the Learning Log template included in this syllabus.

Learning Logs will be evaluated using the following grading criteria:
- The student was thoughtful and reflective in each Learning Log entry.
- The student links mathematics teaching to the NCTM Principles and Standards as well as the Common Core State Standards for Mathematical content and 8 Mathematical Practice Standards for students.
- The student shows evidence of growth in learning.

**Grading Scale – The Learning Log will be graded using the following scale:**

- **9 – 10 Points:** All three of the criteria are met completely on each Learning Log entry. The student had 3 entries in the Log.
- **5 – 8 Points:** Two of the criteria are met completely; the other is met partially. The student had only 2 entries in the Learning Log.
- **0 – 4 Points:** Assignment was carelessly done.
Reading Reflections:
During the semester selected articles will be assigned. The purpose of the assigned readings is to familiarize students with topics prior to class discussions and activities. Your reflective responses can include, but are not limited to, personal reflections, ideas and strategies as they relate to the teaching and learning of mathematics. Your name, the Course and Section Number, Title of Article and the Reading Reflection number should appear at the beginning of each entry. Limit your statements to .5 - 1 type written sheet of 8x11.5 paper. Your reading reflection is due on the date indicated on the Class Schedule. The following statement/questions are to help guide your comments:

- List 2 BIG ideas (two clear and concise sentences about what you learned from reading the entire article).
- Talk about the mathematics in the article! How does what you have read in the article compare to the textbook and practices, which you have observed and experienced as an elementary, middle or high school student and/or experienced in a classroom?
- Did you read anything that surprised you? That you did not agree with? That you have questions about?
- Which Common Core State Standards for Mathematics (both the content and the practice standards) support what you read?

The three articles are:

- **Reading Reflection #1:** “Challenge Beginning Teacher Beliefs” Teaching Children Mathematics, April 2013, Vol. 19, No. 8
- **Reading Reflection #2:** “Mastering Fact Fluency: Are They Game?” Teaching Children Mathematics, September 2013, Vol. 20, No. 2
- **Reading Reflection #3:** “Fractions Instruction: Linking Concepts and Procedures.” Teaching Children Mathematics, August 2013, Vol. 20, No. 1

Readings will be evaluated using the following criteria:

<table>
<thead>
<tr>
<th>POINTS</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Reflections indicate that the student has read and thoughtfully reflected on the material in the article using the guided questions to frame thinking about the content. Connections to previous textbook readings, personal and/or class experiences are included and reference is made to the Common Core State Standards for Mathematical Content and the 8 Mathematical Practice Standards for students. Work is submitted on or before the due date.</td>
</tr>
<tr>
<td>3-4</td>
<td>Reflections indicate that the student has read the material in the article using the guided questions to frame thinking about the content. Connections to previous textbook readings, personal and/or class experiences are included and reference is made to the Common Core State Standards for Mathematical Content and the 8 Mathematical Practice Standards for students. Work is submitted after the due date.</td>
</tr>
<tr>
<td>2</td>
<td>Statements indicate that the student has read the article, but comments are more summary than reflective. Connections to previous textbook readings and/or personal/class experiences are not evident. Work is submitted after due date.</td>
</tr>
<tr>
<td>1</td>
<td>Reflections indicate that the student has skimmed the material in the article or just wrote a summary. Work is submitted after due date.</td>
</tr>
</tbody>
</table>

Three reading reflections will be assigned. They are due on January 23, February 13 and March 6, 2014.

Adjusting Mathematical Language to the Common Core: Refer to the handout with the same name. Choose one of the 14 old habits to eliminate/new habits to adopt. For example, you could choose the following:

- **Old habit to eliminate:** “Let’s ‘borrow’ from the tens place.”
  The problem: This doesn't prepare students for more-difficult borrowing and fractions.
- **New habit to adopt:** Use “regrouping,” “trading,” or “decomposing” instead.

Devise a visually appealing and mathematically correct advertisement/proclamation that would support the “New Habit” at an appropriate grade level, referencing the appropriate CCSSM content AND practice standards that could be shared on Pinterest or other appropriate online sites for students, parents and/or classroom teachers to better understand the new habit! Use the rubric below as a guideline! You may choose to work independently or with one or two other classmates. All submissions will be presented to the class on April 10, 2014.
### RUBRIC FOR ADJUSTING MATHEMATICAL LANGUAGE TO THE COMMON CORE

#### Student Name(s): _____________________________

<table>
<thead>
<tr>
<th>Number of Points earned</th>
<th>Category</th>
<th>Unsatisfactory (.5 point)</th>
<th>Basic (1 point)</th>
<th>Proficient (1.5 points)</th>
<th>Distinguished (2 points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>/2</td>
<td>Mathematical Content Reflects the Appropriate “New Habit”</td>
<td>Displays errors in knowledge of the mathematical content. No examples or inappropriate examples. Grade level and appropriate CCSSM are not evident. No reference to one or more of the 8 Mathematical Practice Standards.</td>
<td>Explains the mathematical content without difficulty, but expresses ideas in rudimentary form. Adequate choice of examples; may contain minor flaws. Either the grade level or the appropriate CCSSM are not evident. Reference to one or more of the 8 Mathematical Practice Standards is not evident.</td>
<td>Clearly articulates mathematical content. Appropriate choice of examples. Grade level and appropriate CCSSM are evident, but reference to one or more of the 8 Mathematical Practice Standards is not evident.</td>
<td>Fully and eloquently articulates mathematical content. The examples are well-chosen. Develops connections among mathematical concepts. Grade level and appropriate CCSSM are evident as well as reference to one or more of the 8 Mathematical Practice Standards.</td>
</tr>
<tr>
<td>/2</td>
<td>Representations (pictures, equations, diagrams, graphs, tables, etc.)</td>
<td>Representations are inappropriate or unclear.</td>
<td>Representations are clear and appropriate, but no connections are made between representations.</td>
<td>Representations are clear and appropriate, with explanations of significant elements. Mentions connections among representations.</td>
<td>Representations are clear and appropriate, with explanations of significant elements. Clearly explains connections among representations.</td>
</tr>
<tr>
<td>/2</td>
<td>Mathematical Communication</td>
<td>Consistently inappropriate use of mathematical terminology and/or symbols.</td>
<td>Adequate use of mathematical terminology and/or symbols; may contain minor flaws.</td>
<td>Appropriate use of mathematical terminology and/or symbols.</td>
<td>Sophisticated use of mathematical terminology and/or symbols.</td>
</tr>
<tr>
<td>/2</td>
<td>Presentation Structure</td>
<td>The visual presentation has no clearly defined structure or the structure is chaotic.</td>
<td>The visual presentation has a recognizable structure, with minor flaws.</td>
<td>The visual presentation has a recognizable structure.</td>
<td>The visual presentation has a recognizable structure and is easy to understand.</td>
</tr>
<tr>
<td>/2</td>
<td>Oral Communication</td>
<td>Does not speak clearly to the group. Errors in mathematical vocabulary.</td>
<td>Speaks clearly with no mathematical errors, but has difficulty communicating.</td>
<td>Speaks clearly and effectively.</td>
<td>Speaks clearly and effectively and is sophisticated in communicating the mathematics.</td>
</tr>
</tbody>
</table>

**Number of Points OUT OF 15**  
(Everyone earns 5 points just for trying!)

**Comments:**
**Virtual Activity #1: Place Value-Whole Number - Due February 27, 2014**

<table>
<thead>
<tr>
<th>Reflection, Activity and/or Exploration</th>
<th>Seat Time/Comments (actual time spent on assigned tasks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Refer to the Online Resources on <strong>pages 214 - 215</strong> in the Van de Walle course textbook</td>
<td></td>
</tr>
<tr>
<td>2. Explore these three sites – <strong>1). Mega Penny Project, 2). Numbers and the Number System: Place Value (Primary Resources), and 3). Place-Value Game, Jefferson Lab</strong></td>
<td></td>
</tr>
<tr>
<td>3. For each of the “virtual sites” explored above record in your math log: <strong>a.</strong> any mathematical discovery that you made while using the virtual activity; <strong>b.</strong> the implication/benefit for using the site in a classroom; <strong>c.</strong> the Common Core State Standard(s) explored and Mathematical Practices; <strong>d.</strong> if any mathematical concepts were clarified for you during the exploration; <strong>e.</strong> and any questions that emerged (be very descriptive/detailed in your explanation)</td>
<td></td>
</tr>
<tr>
<td>4. Using google (or another search engine) locate and explore 2 other sites related to whole number-place value concepts that is appropriate to use in grades K - 8, and write a brief description of the site and the implication/benefit for using the site to reinforce, extend, introduce place value – whole number concepts</td>
<td></td>
</tr>
<tr>
<td>5. Keep track of the time you spend exploring the activities/searching for sites (average time is 2 hours), and recording the information based on the criteria listed (numbers 3 and 4)</td>
<td></td>
</tr>
<tr>
<td>6. ENJOY!</td>
<td></td>
</tr>
<tr>
<td>7. Submit this sheet and your log in class on February 27th, 2014</td>
<td></td>
</tr>
</tbody>
</table>

**Virtual Activity #2: Exploring Fractions – Due March 27, 2014**

<table>
<thead>
<tr>
<th>Reflection, Activity and/or Exploration</th>
<th>Seat Time/Comments (actual time spent on assigned tasks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Refer to the Online Resources on <strong>page 313</strong> in the Van de Walle course textbook</td>
<td></td>
</tr>
<tr>
<td>2. Explore these three sites – <strong>1). Fraction Bars (Math Playground), 2). Fraction Track and 3). National Library of Virtual Manipulatives</strong></td>
<td></td>
</tr>
<tr>
<td>3. For each of the “virtual sites” explored above record in your math log: <strong>a.</strong> any mathematical discovery that you made while using the virtual activity; <strong>b.</strong> the implication/benefit for using the site in a classroom; <strong>c.</strong> the Common Core State Standard(s) explored and Mathematical Practices; <strong>d.</strong> if any mathematical concepts were clarified for you during the exploration; <strong>e.</strong> and any questions that emerged (be very descriptive/detailed in your explanation)</td>
<td></td>
</tr>
<tr>
<td>4. Using google (or another search engine) locate and explore 3 other sites related to fraction (decimals, percents, ratios) concepts <strong>that is appropriate to use in grades 6-8 only</strong>, and write a brief description of the site and the implication/benefit for using the site to reinforce, extend, introduce fraction concepts</td>
<td></td>
</tr>
<tr>
<td>5. Keep track of the time you spend exploring the activities/searching for sites, and recording the information based on the criteria listed (numbers 3 and 4)</td>
<td></td>
</tr>
<tr>
<td>6. ENJOY!</td>
<td></td>
</tr>
<tr>
<td>7. Submit this sheet and your log in class on March 27th, 2014</td>
<td></td>
</tr>
</tbody>
</table>
LEARNING LOG

NAME: ___________________________ DATE: ________________________

CLASSROOM REFLECTION:
How does what you have read in the text or learned during class compare to practices which you have both observed and experienced in the school classroom?

“Talk” about the mathematics that was discussed in class today.

How and why do you think what you have done in class will contribute to your professional preparation?

Were you confused or surprised by any of the information presented in class or in the text? Were there any topics about which you would like to know more?

List the Common Core State Standards for Mathematical Content that were addressed in the session including the grade levels. What Mathematical Practice Standards were addressed?

Other comments/observations about the class:
## Class Schedule:

<table>
<thead>
<tr>
<th>Date</th>
<th>Week</th>
<th>Topic Considered</th>
<th>Readings</th>
<th>Assignments</th>
</tr>
</thead>
</table>
| 01/09 | 1    | • Class Organization and Requirements  
      • Teaching Mathematics in the 21st Century - Reform in Mathematics Education  
      • Exploring What It Means to Know and Do Mathematics  
      • NCTM Standards and the Common Core State Standards for Mathematics and the 8 Standards for Mathematical Practice  
      • Teaching through Problem-Solving  
      • Teaching All Children Mathematics | Chapters 1 - 7  
      (Distribute Reading Reflection 1, “What Does Good Math Instruction Look Like?”, Reading Reflection 2, “Why Children Have Difficulties Mastering the Basic Number Combinations and How to Help Them” and Reading Reflection 3, “Practical Tips for Making Fractions Come Alive and Make Sense”). | Note: readings should be read prior to class  
      Note: assignments are listed on the date which they are due |
| 01/16 | 2    | • Teaching through Problem-Solving  
      • Building Assessment into Instruction  
      • Developing Early Number Concepts and Number Sense | Chapters 1 - 8 | |
| 01/23 | 3    | • Developing Meaning for the Operations  
      • Helping Students Master the Basic Facts  
      • Developing Whole Number Place-Value Concepts | Chapters 9 - 11 | DUE – READING REFLECTION 1, “Challenge Beginning Teacher Beliefs”.
| 01/30 | 4    | • Developing Whole Number Place-Value Concepts | Chapter 11 | |
| 02/06 | 5    | • Developing Strategies for Addition and Subtraction Computation  
      • Developing Strategies for Multiplication and Division Computation | Chapters 12 - 13 | |
| 02/13 | 6    | • Developing Strategies for Addition and Subtraction Computation  
      • Developing Strategies for Multiplication and Division Computation | Chapters 12 - 13 | DUE – READING REFLECTION 2, “Mastering Fact Fluency: Are They Game?”
| 02/20 | 7    | VIRTUAL ACTIVITY #1: PLACE VALUE – WHOLE NUMBER  
      DUE 02/27/14 | | |
| 02/27 | 8    | • Developing Fractions, Decimals and Percents Concepts  
      • Proportional Reasoning | Chapters 15 - 18 | DUE – VIRTUAL ACTIVITY #1: Place Value-Whole Number
| 03/06 | 9    | • Developing Fractions, Decimals and Percents Concepts  
| 03/13 | 10   | SPRING BREAK | | |
| 03/20 | 11   | VIRTUAL ACTIVITY #2: EXPLORING FRACTIONS  
      DUE 02/27/14 | | |
| 03/27 | 12   | • Developing Measurement Concepts  
      • Geometric Thinking and Geometric Concepts | Chapters 19 - 20 | DUE – VIRTUAL ACTIVITY #2
| 04/03 | 13   | • Developing Measurement Concepts  
      • Geometric Thinking and Geometric Concepts | Chapters 19 - 20 | |
| 04/10 | 14   | • Presentations of “Adjusting Mathematical Language to the Common Core”  
      • Algebraic Thinking: Generalizations, Patterns and Functions  
      • Developing Concepts of Exponents, Integers and Real Numbers | Chapters 15 & 23 | DUE - Adjusting Mathematical Language to the Common Core
| 04/17 | 15   | • Developing Concepts of Data Analysis  
      • Exploring Concepts of Probability | Chapters 21 - 22 | DUE – LEARNING LOGS
| 04/24 | 16   | | | FINAL OPPORTUNITY

Have a safe and wonderful summer! 🌞