Course Description

EDEL 520: Elementary Mathematics Education Component. This initial licensure course enables prospective teachers to study practices, content, and issues related to mathematics in the elementary school classroom, including contemporary instructional strategies through model lessons and demonstrations, selected content, planning, resources, and evaluation. Furthermore, it requires an implementation during student teaching. Students learn to integrate mathematics with other disciplines, particularly social studies, science, and literacy, to frame math learning and teaching in contexts with which children can identify. Prospective teachers will apply Colorado Academic Standards for Mathematics in lessons they prepare and teach in keeping with the Performance Based Standards for Colorado Teachers.

Program Knowledge Base

The knowledge base of this course is centered on the collectively held belief that teachers engage in reflective thought and practice leading to the processes of rational problem solving and decision-making. The program adheres to the belief that teachers construct knowledge about learners, about content and processes, and about contexts that surround teaching and learning through reflection, reading, writing, discussion, and field-based experiences. The Elementary Education Department recognizes integration both within and across specific curricular areas in the elementary school. The knowledge base for this course is therefore consistent with the program of Elementary Education.

This mathematics education course focuses on increasing the prospective teacher’s level of pedagogical content knowledge. Classroom teachers make choices for optimizing pupils’ learning based on their professional knowledge of appropriate mathematics content, instructional strategies, and learners themselves. The course instructor uses modeling, direct instruction, demonstrations, and coaching, to provide experiences that promote problem solving, social participation in current instructional strategies, and professional reflection. Examples of mathematics integration with other areas give experience of mathematics in context in conjunction with appropriate mathematics content courses, prepares prospective teachers to implement instruction consistent with National Council for Accreditation of Teacher Education Program Standards for Elementary Teacher Preparation, Performance Based Standards for Colorado Teachers, Colorado Academic Standards for Mathematics, standards promulgated by the National Council of Teachers of Mathematics and other professional organizations.

Sources providing a knowledge/research base for this component of EDEL 520 Course include such professional organizations and learned societies and their publications as the following: National Council of Teachers of Mathematics, School Science and Mathematics Association, University of Chicago School Mathematics Project, National Council for the Social Studies, International Reading Association, American Educational Research Association, Association for Supervision and Curriculum Development, National Society for the Study of Education, Eisenhower National Clearinghouse for
Goals of the Course

EDEL 520 prepares prospective teachers to develop an instructional knowledge base in the mathematics curriculum commonly taught to elementary school students in Colorado. This knowledge is used to integrate thinking skills, academic content, and democratic dispositions in ways that make learning mathematics a relevant and meaningful experience for all children. By making instruction comprehensible, increasing interaction among students, and teaching thinking and study skills, candidates will learn how to develop activities and plan lessons that meet the needs of all students at different states of development.

- Prospective teachers will acquire competence in guiding the mathematical education of elementary school children in exploring mathematical concepts, per se, and through integrating mathematics with other areas. (PBSCT 2.1, 2.2, 4.4 NCATE 2d, 2i)

- Prospective teachers will cultivate a systematic application of reflective decision making in promoting the mathematical education of elementary school students. (PBSCT 2.1-2.2; 3.1-3.8; 4.4; 5.1, 5.3, 5.5, 6.1, 7.1 NCATE 5b)

- Prospective teachers will value and act upon their understanding that mathematics is a dynamic discipline, important to every student's future, one in which all young people can participate as creative and successful learners and one which opens societal opportunities regardless of race, gender, religion, handicap, or national origin. (PBSCT 2.1-2.2; 3.1, 4.4, 6.1, 8.1-8.2; 9.1-9.3,10.1, 10.4 NCATE 2a, 2d, 3b, 3d)

National and State of Colorado Standards Met

PBSCT – Performance-Based Standards for Colorado Teachers
InTaSC – Interstate Teacher Assessment and Support Consortium
NCATE – National Council for Accreditation of Teacher Education
NCTM – National Council of Teachers of Mathematics
ACEI – Association for Childhood Education International

Professional Standards Met/Course Objectives

<table>
<thead>
<tr>
<th>Course Objective</th>
<th>PBSCT/UNC</th>
<th>InTaSC</th>
<th>NCTM</th>
<th>ACEI</th>
<th>Readings &amp; Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prospective teachers will acquire competence in guiding the mathematical education of elementary school children in exploring mathematical concepts, per se, and through integrating mathematics with other areas.</td>
<td>4, 5, 8</td>
<td>1.0, 2.3, 3.1</td>
<td>Elementary classroom videos &amp; class discussion.</td>
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<tr>
<td>Prospective teachers will cultivate</td>
<td>2.1-2.2; 7, 8, 9</td>
<td>1.0, 2.3, 3.1</td>
<td>Things to ponder,</td>
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<tr>
<td>Task</td>
<td>Relevancy</td>
<td>Course Content</td>
<td>Sources</td>
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<tr>
<td>A systematic application of reflective decision making in promoting the mathematical education of elementary school students.</td>
<td>3.1-3.8; 4.4; 5.1, 5.3, 5.5, 6.1, 7.1</td>
<td>3.5 discussions, and mathematical journey folder assignment.</td>
<td></td>
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<tr>
<td><strong>Prospective teachers will value and act upon their understanding that mathematics is a dynamic discipline, important to every student's future, one in which all young people can participate as creative and successful learners and one which opens societal opportunities regardless of race, gender, religion, handicap, or national origin</strong></td>
<td>2, 5</td>
<td>Equity Communication 3.2, 3.4 Burns textbook, equity principle, ethnomathematics, classroom diversity teaching, and discussion.</td>
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<tr>
<td><strong>Prospective teachers will become familiar with mathematics learning and instruction in the elementary school grades and across mathematical strands.</strong></td>
<td>5.02.1(a) ~ 5.04.2 5.04.1/5.04.2 5.04.3/5.04.4</td>
<td>4, 5, 8 Number and operation, Algebra, Geometry, Measurement, Data analysis &amp; Probability 1.0, 2.3 Van de Walle textbook, Colorado Academic Standards, discussions, and math concept lesson plan assignment.</td>
<td></td>
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<tr>
<td><strong>Prospective teachers will become familiar with selected resources, including children's literature, for elementary school mathematics experiences and encounters.</strong></td>
<td>5.06.01 8.02.3(b)</td>
<td>1, 7, 8 Communication 1.0, 2.3, 3.1, 3.5 Classroom activities (Responsive classroom), math concept lesson plan assignment, modeling, and third choice textbook.</td>
<td></td>
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<tr>
<td><strong>Prospective teachers will select developmentally appropriate practice, consistent with Piagetian and constructivist theories, for elementary school mathematics teaching and learning.</strong></td>
<td>5.04.1/5.04.2 5.04.3/5.04.4</td>
<td>2, 5 2.3 Modeling, children’s literature brought to class, and math concept lesson plan assignment.</td>
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<tr>
<td><strong>Prospective teachers will understand the central role of problem solving in learning and applying mathematics.</strong></td>
<td>5.03.4 8.02.2(b)</td>
<td>2, 7, 8, 9 1.0, 2.3, 3.1, 4.0, 5.1 Math concept lesson plan assignment, classroom diversity lesson plan and teaching.</td>
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<tr>
<td><strong>Prospective teachers will understand the concept of “drill and practice at the problem solving level”.</strong></td>
<td>5.06.1/5.06.2 5.06.5 8.02.2 (a)</td>
<td>1, 2, 7, 8, 8 Equity 1.0, 3.1, 3.2, 3.4 Equity principle, videos, modeling, lecture, culturally responsive mathematics, and discussion.</td>
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<tr>
<td><strong>Prospective teachers will understand “mathematics is a search for relationships that are not obvious”.</strong></td>
<td>5.03.4</td>
<td>4, 7 2.3 Math curriculum activity, Van de Walle textbook, and discussion.</td>
<td></td>
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<tr>
<td>Topic</td>
<td>Context</td>
<td>Required Materials</td>
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<td>---------------------------------------------------------------------</td>
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<tr>
<td>Prospective teachers will organize and implement mathematics learning experiences for peers and for elementary school students.</td>
<td>5.05.2/5.05.3 4, 5, 6, 7, 8 1.0, 2.3, 3.1, 3.5</td>
<td>Math concept lesson plan assignment, modeling, and videos.</td>
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<tr>
<td>Prospective teachers will develop awareness of roles for technology, including calculators and computers, in teaching and learning elementary school mathematics.</td>
<td>5.07.1/5.07.2 5.07.3 8.02.1(b) 3, 10 2.3</td>
<td>Cyberhunt activity, Van de Walle textbook, technology classroom centers article, and discussion.</td>
<td></td>
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<tr>
<td>Prospective teachers will encounter integration of elementary school mathematics with other areas and with people's lives, so as to craft math lessons in contexts that are meaningful to all children and cultures.</td>
<td>5.06.2/5.06.3 5.06.5 9.02.2(d) 2, 5 Connection 1.0, 2.3, 3.4, 3.5</td>
<td>Videos, Burns textbook, Van de Walle textbook, modeling, and discussion.</td>
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<tr>
<td>Prospective teachers will assess as an ongoing informal and formal process to inform, and to improve math learning experiences and student performance.</td>
<td>5.03.3 8.02.4 (a) 8.02.4(b) 6, 7 1.0, 2.3, 4.0, 5.1</td>
<td>Ashlock activity, assessment principle, and math concept lesson plan assignment.</td>
<td></td>
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**Required Text**

4. Plus one of the following texts:

**Recommended Texts**

**Selected Children’s Books Used in Class**

**Selected Web Sites Used in Class**
- Colorado Department of Education at http://www.cde.state.co.us
- National Council of Teachers of Mathematics (NCTM) at http://www.nctm.org
- NCTM Illuminations at http://illuminations.nctm.org
**Grades Earned**

93-100 percent is an “A”
80-92 percent is a “B”
70-79 percent is a “C”
60-69 percent is a “D”
Below 59 percent is an “F”

A (93-100% of points): A final grade of A means that the student has performed all or most in-class assignments and projects at an advanced level and/or exceptional level and has done so in a timely manner. He/she is always well prepared for class with notes about reading topics, contributes to discussions on a regular basis during whole class discussion and in small groups, and has missed no more than 1 class.

B (82-92% of points): A final grade of B means that the student has shown “good graduate level work” in his or her performance by being prepared to complete in-class assignments and discussions. He/she also has turned in required projects and assignments on time and met most of the grading criteria. He/she has not missed more than 2 classes.

C (71-81% of points): A final grade of C means that the student has completed all or most course assignments and projects but has not always met criteria. A grade of C is assignment when a student (a) completes required projects and is sometimes prepared for class but often does not participate in class discussions; (b) turns in projects that are inadequate based on documented grading criteria; and/or (c) is absent from class more than twice.

F (less than 59% of points): A final grade of F means that the student has not satisfactorily completed the course assignments, completed required readings, or participated in class discussions. A grade of F is assigned when the student loses a significant amount of points (a) through excessive absenteeism, (b) by not coming to class prepared or (c) by not completing assigned projects.

**Policy on Incompletes:** An “I” is assigned due to unanticipated circumstances during the last week of the term that make the student unable to complete course requirements within the allotted time (e.g., he/she missed the final examination due to sickness or an emergency in the family). The instructor must submit to the school director a written notice of the specific coursework to be completed before the final grade is determined; a copy is kept in the school and one is provided to the student. To amend the grade of “I” with an earned grade on the student’s transcript, the student must complete all incomplete course work by the last day of the next semester. If the course requirements are not completed within the time limitation and the grade received in the Registrar’s Office, the grade will be recorded on the academic record as a failing or unsatisfactory grade.

**Policy on Plagiarism:** Plagiarism is the act of appropriating the written, artistic, or musical composition of another, or portions thereof; or the ideas, language, or symbols of same and passing them off as the product of one’s own mind. Plagiarism includes not only the exact duplication of another’s work but also the lifting of a substantial or essential portion thereof (UNC definition). Regarding written work in particular, direct quotations, statements which are a result of paraphrasing or summarizing the work of another, and other information which is not considered common knowledge must be cited or acknowledged, usually in the form of a footnote. Quotation marks or proper form of indentation shall be used to indicate all direct quotes. Regarding class projects, you are not to use as your entire presentation the completed works of faculty members, fully incorporated websites, or any other body of work in which you are not the author. Of course, with proper referencing, you can import portions of such works and websites to enhance and illustrate your presentation, and you can provide references to these other works for students who have an interest in pursuing a topic further.
Policy on Originality of Products: You are encouraged to build on your own previous work from other classes and programs, and to integrate material and ideas that you have learned in other classes into this class, with appropriate referencing. But projects from other classes are not to be duplicated and turned in to fulfill EDEL 520 requirements, nor can you take work that you completed in another class and simply re-configure it, or enhance it, for this class. In other words, you are expected to do original work for each project and assignment that you complete in this class.

Accommodation Statement: Students who believe that they may need accommodations in this class are encouraged to contact the Disability Support Services, Voice/TTY (970) 351-2289, or fax (970) 351-4166, or visit www.unco.edu/dss as soon as possible to ensure that accommodations are implemented in a timely fashion.

Inclusivity Statement
The College of Education and Behavioral Sciences (CEBS) supports an inclusive learning environment where diversity and individual differences are understood, respected, appreciated, and recognized as a source of strength. We expect that students, faculty, administrators and staff within CEBS will respect differences and demonstrate diligence in understanding how other peoples’ perspectives, behaviors, and worldviews may be different from their own.
Course Assignments

1. Present a Concept Lesson Plan around a mathematics theme in a group of three by choosing a lesson from your third required textbook that uses a children’s book to teach at least one concept (content standard) for 30 minutes. Each group will present the lesson to the whole class by creating an age appropriate lesson plan, teaching this math concept accurately to the whole class, and discuss how this lesson would meet the needs of all learners in your classroom. Everyone must have a turn reading from the children’s book, and discuss how this lesson would meet the needs of all learners in your classroom. You need to bring one copy of your lesson plan for Dr. Harding to have while you are presenting, and you need to post your lesson on Blackboard for your peers. (24 points) Due Sept. 21, Oct. 5, 12, 26, or November 2, 9.

2. Complete a Field Observation Paper based on three specific mathematic teaching strategies you observed so far in your field practicum and their effectiveness in mathematics learning. Detailed Instructions and assessment criteria for developing, implementing, and evaluating is at the end of this syllabus. (25 points) Due September 14.

3. Complete a Midterm Examination in class covering all readings, discussions, activities, lessons, etc. or attend the Colorado Council of Teachers of Mathematics Conference in Denver. Conference Report Rubric is at the end of this syllabus. (25 points) Midterm Taken September 28 or attend CCTM Conference September 25 with paper report due October 5.

4. There are three parts to this assignment (1) complete a Classroom Diversity Math Lesson for children in your partner school. The math content and date for teaching this lesson plan needs to be discussed and approved by your elementary classroom teacher prior to creating this lesson plan. You should plan for teaching at least half of an hour to the whole class. Lesson must use a diverse children’s literature book to teach math. See rubric at end of this syllabus. Due October 12. (2) After being approved to teach the lesson plan by Dr. Harding, Teach and Audio record your Math Lesson Plan to children in your classroom. Make sure you and the children can be heard on your audio recording. Detailed directions will be given in class. Submit Audio recording and transcription (classroom dialogue) you create to Blackboard. Due by November 23. (3) Written Teaching Reflection discussing what went well with the teaching of your math lesson and what you would do differently next time. Reflection questions can be found at the end of this syllabus. Due on November 30. (75 points total – each part is 25 points)

5. Complete an Internet Cyber Hunt with integrated mathematics themes. This is an online assignment in Blackboard. Detailed instructions will be presented. (15 points) Due October 26.

6. Compose a Math Facing an American Phobia Reflection Paper based on the reading of the book by Burns. You need to reflect upon at least three ideas you agree with, disagree with, and/or would like to extend. This should be a two to three page double spaced paper with font size 12 expressing your opinion about this affective side of mathematics. The evaluation rubric is at the end of this syllabus. (12 points) Due November 2.

7. Develop a Mathematical Journey reflection on practice and reflection in practice on your perspectives about math. You will engage in a project you can adapt so that children can relate to mathematics present in their lives. This project encourages the creative use of various kinds of learning and modalities. The following elements are required: (1) visual representations of your own mathematical journey throughout your life, which will serve as a map of your journey including this course on the inside of a manila folder, (2) artifacts you collect as evidence of your
mathematical journey during our course, and (3) one page reflection of your perspectives on teaching mathematics through this course. (26 points) Due November 16.

8. Participation in Class Activities. We will have readings, activities, and discussions taking place in our class. Activities will be completed individually, in small groups, and as a whole class. This requirement promotes democratic dispositions and models their presence in the classroom. (25 points) Due Everyday
**Class Overview and Reading Assignments**

All chapters need to be read out of *Elementary and Middle School Mathematics Teaching Developmentally* (8th Edition) by Van De Walle, Karp, & Bay-Williams unless otherwise noted.

NCTM = National Council of Teachers of Mathematics Standards
CMCS = Colorado Model Content Standards for Mathematics

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**August 24, 2015**
Responsive Classroom
Overview of Course
How do students learn math?

**August 31, 2015**
New Standards for a New Century
Teaching, Learning, & Equity in Math
**Due Today: Read chapter 1, 2, 3, & 4**

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**September 7, 2015**
Labor Day Holiday
No class meeting

**September 14, 2015**
NCTM: Algebra Standard, & Equity Principle
CAS: Standard 2-Patterns & Algebra
WIDA: Math Standard
Learning Algebra Through Problem Solving
Teaching Diversity & Ethnomathematics
**Due Today: Read chapters 6 & 14**
Math Dictionary p. 6-15 & 68-70
Field Observation Paper

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**September 21, 2015**
NCTM: Numbers & Operations Standard
CAS: Standard 1-Number Sense/Properties/Operation
Using picturebooks in the math classroom
Number Sense & Operational Sense
Understanding Addition & Subtraction
**Due Today: Read chapters 8 & 12**
Math Dictionary p. 35-45

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**September 28, 2015**
Midterm Exam or Attend the CCTM Conference September 25 in Denver
www.cctmath.org
Student Conference Rates Apply

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**October 5, 2015**
NCTM: Geometry Standard
CAS: Standard 4-Geometric Concept
Organizing for Effective Teaching
Implementing Effective Assessment
**Due Today: Read chapters 5, 11, & 20**
Math Dictionary p. 71-90
Conference Paper

**October 12, 2015**
NCTM: Numbers & Operations Standard
CAS: Standard 1-Number Sense/Operation
Teaching English Language Learners
Multiplication & Division
**Due Today: Read chapters 9 & 13**
Math Dictionary p. 46-61

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**October 19, 2015**
NCTM: Technology Principle
Blackboard Technology Assignment
Virtual Class. No class in person.
Technology in the Elementary Classroom
**Due Today: Read chapter 7**
Classroom Diversity Lesson Plan

**October 26, 2015**
NCTM: Numbers & Operations Standard
CAS: Standard 1-Number Sense Fractions
Understanding Decimals/Ratios/Percent
**Due Today: Read chapters: 15, 16, & 17**
Math Dictionary p. 16-30
CyberHunt
November 2, 2015
NCTM: Equity Principle
Mathematics as a Phobia & Math Dispositions
Teaching to the affective side of mathematics
Holding all students accountable
**Due Today: Burns’ *Math: Facing an American Phobia*, whole book read, Reflection Paper**

November 9, 2015
NCTM: Data Analysis & Probability Stand.
NCTM: Measurement Standard
CAS: Standard 3-Data Analysis/Stats/Prob.
CAS: Standard 4-Shape/Dimension/Geo
Representing Data, Probability, Graphing
Developing Perimeter, Volume, Area
**Due Today: Read chapters 19, 21, & 22 Math Dictionary p. 98-127**

**November 16, 2015**
How should math be taught in the elementary classroom?
Researched Based Practices
Integration of mathematics, science, & social studies
**Due Today: Mathematical Journey Folder**

**November 23, 2015**
No face-to-face class meeting today.
Working time to finish the audio transcription of your Classroom Diversity Math Lesson.
**Due Today: Audio Transcription & Audio Recording posted in Blackboard by 5pm**

**November 30, 2015**
Putting the course together!
Teaching a diverse classroom
Formulating the mathematics big understanding
**Due Today: Written Teaching Reflection**

**December 7, 2015**
**Due Today: Final Exam Meeting Time**
From 1-4pm you will sign up for an individual meeting for feedback on your classroom teaching, audio transcription, and reflection as well answering some questions about your teaching. Each meeting will be 12 minutes.
Mathematics Field Observation Paper

Answer the following three questions on this piece of paper, and then word process the fourth reflection question below.

1. What mathematics curriculum does your teacher use? What does it look like?

2. How does your teacher assess mathematics (formal and informal)?

3. What manipulatives does your teacher use to teach mathematics?

4. Type up the following two pages for your reflection paper answering the following questions: Observe 3 mathematics lessons that are taught in your classroom. What mathematics content was being taught? How was each lesson presented (what did it look like: teacher directed, student directed, groups/individuals, modeling, worksheets, manipulatives, etc.)? Was it an effective lesson (did all students understand the mathematics concept)? Is there anything that you could add to each of these lessons to make the instruction more effective?
Classroom Diversity Math Lesson Plan Rubric

Lesson Plan: (in Learning Cycle Format) all section of the lesson plan are detailed: big understanding, materials, standards with learning objectives, engagement, investigation, explain/clarify, conclusion, meeting the needs of all students, and assessment. ____/10

Math Content: covers mathematics concept(s) in depth by acquiring, analyzing, organizing and processing information. ____/5

Diverse Math Children’s Book: lesson includes teaching math concepts while reading aloud a diverse picturebook to your students including active student participation and genuine learning experiences. ____/5

Questions asked during lesson: are high-level questions allowing students to think. Specific questions are in lesson plan to guide math content understanding. ____/5

Total: ____/ 25

Mathematics Concept Lesson Group Teaching

<table>
<thead>
<tr>
<th></th>
<th>High Quality 6 Points</th>
<th>Quality 4 Points</th>
<th>Low Quality 1 point</th>
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<tbody>
<tr>
<td><strong>Lesson Plan Content</strong></td>
<td>Covers mathematics concept in depth by acquiring, analyzing, organizing and processing information. Elaborate throughout. Includes details. Teaches concept accurately.</td>
<td>Includes essential information with appropriate mathematics learning. Includes elaboration beyond minimal requirements. Concept is clear.</td>
<td>Lacking essential information. Lacks elaboration. Concept is unclear.</td>
</tr>
<tr>
<td><strong>Teaching</strong></td>
<td>Concept is clearly presented. Method &amp; grouping decisions enhance learning for all students. Directions are concise. Manipulatives are used to enhance lesson.</td>
<td>Concept is presented. Method &amp; grouping decisions make sense. Directions are clear. Active constructivist learning takes place.</td>
<td>Lacks clarity of concept. Directions are unclear. Methods &amp; grouping do not make sense.</td>
</tr>
<tr>
<td><strong>Standards</strong></td>
<td>CAS Standards/objectives for mathematics, language arts, and</td>
<td>Some of the CAS and WIDA standards/learning objectives</td>
<td>Standards and learning objectives were not used</td>
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</table>
Mathematics Facing an American Phobia Burns’ Book Reflection Rubric

<table>
<thead>
<tr>
<th>Paper Content</th>
<th>High Quality 4 Points</th>
<th>Quality 2 Points</th>
<th>Low Quality 1 Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covers mathematics concepts in depth by acquiring, analyzing, organizing, and processing your reflection.</td>
<td>Covers mathematics concepts with essential reflection information.</td>
<td>Lacks mathematics concepts essential information. Lacks a clear reflection.</td>
<td></td>
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<tr>
<td>Paper References</td>
<td>Three ideas from the book are elaborated on in the paper to support your reflection. A page number is referenced after the sentence where it’s found in the book. Example (p. 53).</td>
<td>Two ideas from the book are elaborated on in the paper to support your reflection. A page number is referenced after the sentence where it’s found in the book. Example (p. 53).</td>
<td>One or more ideas from the book are elaborated on in the paper to support your reflection. No page numbers are referenced.</td>
</tr>
<tr>
<td>Writing of Paper</td>
<td>Whole paper gives evidence to professional level writing with correct grammar and spelling. Structure of assignment is followed.</td>
<td>Evidence of some professional level writing with correct grammar and spelling. Structure of assignment is followed.</td>
<td>Lacking evidence of professional level writing. There is no structure for assignment.</td>
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Classroom Diversity Math Lesson Written Reflection Guidelines

Type up a reflection (3 pages) of your teaching elementary students in the classroom based on the Math Lesson Plan you created. Your reflection should address the following questions after reading your teaching transcriptions of the diverse lesson you taught to students:

1. How do you feel the lesson went (what are your perceptions of your strengths of this lesson and what are your perceptions for areas of growth within this lesson)?

2. How did your lesson planning strengthen your teaching?

3. How did you further the students’ mathematical knowledge, skills, and engage them intellectually in understanding math subject matter?

4. How did integrating mathematics and diverse children’s picturebook work in your lesson?

5. What strategies did you use to monitor student learning during this teaching? How many students were successful in understanding this math content because of your teaching? Which students were not successful in understanding this math content because of your teaching?

6. How did you scaffold instruction (sheltered instruction, differentiation, modeling, vocabulary, etc.) for all children in your classroom (English language learners, students who understand the math concepts, students who do not understand the math concepts, special needs students, students who have negative attitudes about math, and gifted students)?

7. What did you learn about your teaching from your transcription? How can you understand what children understand or know from listening to what they say?
8. Overall, how would you rate the quality of your mathematics teaching to children on a 1 to 5 scale (1=no student learning, 2=a few students learned, 3=half of the class learned, 4=most of the class learned, and 5=every student in the class learned)? Why do you rate yourself this way?

**Colorado Council of Teachers of Mathematics (CCTM)**

**Conference Report Rubric**

You will need to complete the following information for your conference assignment for each of the conference sessions you attend. You should plan on attending at least 2.5 hours worth of sessions for full credit on this assignment (25 points).

**First**, list the following items: name of session, number of session in book, time of presentation, and presenter(s).

**Second**, you will need to write up a paragraph describing the items, content, knowledge, pedagogy, ideas, etcetera that you will take with you into your future mathematics elementary classroom.

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<tr>
<th></th>
<th>Developing</th>
<th>Proficient</th>
<th>Advanced</th>
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<tbody>
<tr>
<td><strong>Listing of Items</strong></td>
<td>Does not list the items.</td>
<td>Lists the following items for each session attended: name of session, number of session in book, time of presentation</td>
<td>Lists the following items for each session attended: name of session, number of session in book, time of presentation, &amp; presenter(s)</td>
</tr>
<tr>
<td>Points:</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td><strong>Conference Session Examples</strong></td>
<td>Lacks essential information from conference sessions.</td>
<td>Covers conference session with essential information describing items, content, knowledge, ideas, etcetera to take with you into your mathematics classroom.</td>
<td>Covers conference in depth by acquiring, analyzing, synthesizing, and processing information about items, content, knowledge, ideas, etcetera to take with you into your classroom.</td>
</tr>
<tr>
<td>Points:</td>
<td>5</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td><strong>Grammar</strong></td>
<td>Demonstrates evidence of professional-level writing with three or more grammar or spelling errors</td>
<td>Demonstrates evidence of professional-level writing with one or two grammar or spelling errors</td>
<td>Demonstrates evidence of professional-level writing with correct grammar and spelling</td>
</tr>
<tr>
<td>Points:</td>
<td>3</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>