

**CALIFORNIA STATE UNIVERSITY, SAN MARCOS  
COLLEGE OF EDUCATION (Fall 2006)**

**EDMS 543 –Elementary Mathematics Education (41197)  
Wednesday: 7:30 AM- 2:20 PM UH 443**

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**College of Education Mission Statement**

The mission of the College of Education Community is to collaboratively transform public education by preparing thoughtful educators and advancing professional practices. We are committed to diversity, educational equity, and social justice, exemplified through reflective teaching, life-long learning, innovative research and on-going service. Our practices demonstrate a commitment to student-centered education, diversity, collaboration, professionalism, and shared governance. *(Adopted by COE Governance Community, October, 1997).*

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**COURSE DESCRIPTION**

This course focuses on how children develop mathematical understanding; children's mathematical thinking; curriculum development; methods, materials, planning, organization and assessment in various elementary school curricula; and curriculum integration. Methods of cross-cultural language and academic development are integrated into the course.

**Course Prerequisites**

(Admission to the Multiple Subject Credential Program is a prerequisite. Semesters 1-2 of the Integrated Bachelor of Arts and Multiple Subject Credential Program and the consent of the Program Coordinator are also prerequisites.

**Course Objectives**

1. Using reflective writings, teacher candidates will provide ongoing evidence of good depth of understanding as well as application to the classroom, of chosen ideas from weekly assigned readings.
2. Using the interview process to apply the pedagogical content knowledge that is being learned in the course, teacher candidates will improve their use of inquiry for assessment purposes by focusing on students' thinking about mathematics to better understand elementary level students with different understandings.
3. By merging theory and practice in order to enable their future students to understand a mathematical topic and make connections among ideas related to this topic, teacher candidates will participate in the design, construction, and presentation of a reform-minded mathematical activity that focuses on students' mathematical thinking.
4. By compiling an effective list of resources on a predetermined math topic, teacher candidates will demonstrate evidence that they are able to provide students with access to a balanced and comprehensive mathematics curriculum that promotes and enhances student

learning and understanding, and provides conceptual understanding of the logic and structure of mathematics, problem-solving skills, and computational and procedural skills.

5. By reflecting on and weaving what has been learned in the course during the semester regarding mathematics standards, reform-minded mathematics ideas, constructivist teaching and learning methods which enhance how children think and problem solve, teacher candidates will analyze the curriculum that is currently being implemented in their practicum classroom.

6. Teacher candidates will write summary reflections during the course to be submitted, responded to, and archived via TaskStream for final TPE assessments and for creating their final portfolios.

### **Unique Course Requirements (optional)**

Students will be required to have access to children in a grade K-6 for the purpose of conducting a series of math interviews to learn about how children think and problem solve.

Each student will be required to implement and videotape a lesson in his or her observation classroom.

### **Required Texts**

- Van de Walle, J. A. (2007). *Elementary and middle school mathematics: Teaching developmentally* (6th ed). Boston: Pearson Education, Inc. ISBN: : 0-205-48392-5

The text has a companion Web site (under construction):

<http://www.ablongman.com/vandewalle6e>

- California Department of Education (2000). *Mathematics framework for California public schools, kindergarten through grade twelve* (2000 Revised Ed.). Sacramento, CA: Author. This document can be found on the WWW at: <http://www.cde.ca.gov/ci/ma/cf/documents/mathfrwkcomplete.pdf>. The Web site contains a downloadable PDF file. There are also copies in the library for checkout.
- Turnbull, A., Turnbull, R., & Wehmeyer, M. (2007). *Exceptional lives: Special education in today's schools*. (5<sup>th</sup> ed). Pearson/Merrill Prentice Hall. ISBN: 0-13-170869-4.

### **You are required to access the following Web sites and materials for this course.**

- National Council of Teachers of Mathematics (2000). *Principles and standards for school mathematics*. Reston, VA: Author. This document can be found at: <http://www.standards.nctm.org/>
- Star Test Blueprints for Standards Items (grades 2-7) <http://www.cde.ca.gov/ta/tg/sr/documents/math1105.doc>

## **Authorization to Teach English Learners**

This credential program has been specifically designed to prepare teachers for the diversity of languages often encountered in California public school classrooms. The authorization to teach English learners is met through the infusion of content and experiences within the credential program, as well as additional coursework. Students successfully completing this program receive a credential with authorization to teach English learners.

*(Approved by CCTC in SB 2042 Program Standards, August 02)*

## **Teacher Performance Expectation (TPE) Competencies**

The course objectives, assignments, and assessments have been aligned with the CTC standards for the Multiple Subject Credential. This course is designed to help teachers seeking a California teaching credential to develop the skills, knowledge, and attitudes necessary to assist schools and district in implementing effective programs for all students. The successful candidate will be able to merge theory and practice in order to realize a comprehensive and extensive educational program for all students. You will be required to formally address the following TPEs in this course:

### **CTC Standards Alignment:**

The course objectives, assignments, and assessments have been aligned with the CTC standards for Multiple Subjects Credential. The following standards are a primary emphasis in this course:

- **Standard 3:** Relationship between Theory and Practice
- **Standard 4:** Pedagogical Thought and Reflective Practice
- **Standard 5:** Equity, Diversity and Access to the Core Curriculum for All Children
- **Standard 8A:** Pedagogical Preparation for Subject-Specific Content Instruction by MS Candidates (Mathematics)

## **Teacher Performance Expectation (TPE) Competencies:**

### **Primary Emphases:**

- TPE 1a-Subject Specific Pedagogical Skills for MS Teaching (Mathematics)
- TPE 2-Monitoring Student Learning During Instruction

### **Secondary Emphases:**

- TPE 3-Interpretation and Use of Assessments
- TPE 4-Making Content Accessible
- TPE 5-Student Engagement
- TPE 6a-Developmentally Appropriate Practices in Grades K-3
- TPE 6b-Developmentally Appropriate Practices in Grades 4-8
- TPE 6d- Developmentally Appropriate Teaching Practices for Special Education:  
Teaching the Special Education Population in the General Education Environment
- TPE 7-Teaching English Learners
- TPE 8-Learning About Students

- TPE 9-Instructional Planning
- TPE 10-Instructional Time
- TPE 11-Social Environment
- TPE 13-Professional Growth
- TPE 14-Educational Technology in Teaching and Learning

### **College of Education Attendance Policy**

Due to the dynamic and interactive nature of courses in the College of Education, all students are expected to attend all classes and participate actively. At a minimum, students must attend more than 80% of class time, or s/he may not receive a passing grade for the course at the discretion of the instructor. Individual instructors may adopt more stringent attendance requirements. Should the student have extenuating circumstances, s/he should contact the instructor as soon as possible. *(Adopted by the COE Governance Community, December, 1997).*

If you miss one class session or are late (or leave early) more than two sessions, you cannot receive a grade of "A". If you miss two class sessions, your highest possible grade is a "C+".

If possible, please discuss with the instructor any extenuating circumstances that will cause you to miss class prior to your absence. Attendance will be taken at each class session. Furthermore, grades on assignments turned in late will be lowered unless **prior arrangements** have been made with the instructor. Absence is no excuse for not turning in assignments, as they may be sent electronically (e-mail) to the instructor.

### **Students with Disabilities Requiring Reasonable Accommodations**

Students must be approved for services by providing appropriate and recent documentation to the Office of Disable Student Services (DSS). This office is located in Craven Hall 5205, and can be contacted by phone at (760) 750-4905, or TTY (760) 750-4909. Students authorized by DSS to receive reasonable accommodations should meet with their instructor during office hours or, in order to ensure confidentiality, in a more private setting.

### **Course Requirements and Grading Standards**

**ASSIGNMENTS** (The relative weight for each assignment is indicated as a percentage of the total course grade)

Detailed assignment guidelines and scoring rubrics (course packet) will be provided electronically to each student for all written assignments below. The course calendar/topics schedule is attached to this syllabus.

#### **Reading Reflections**

**(10%)** - Each week students will write a "meaningful" reflection on the material assigned to be read for that week. Each reflection will be worth 5 points. These reflections should be one full page in length (use an "11" font, line spacing of 1.5, with **only** your name and class session number as a heading), and should clearly articulate your thoughts on the assigned readings and how you might **specifically apply** what you learned from the articles as a teacher in the classroom. Please do not repeat verbatim from the readings. **Other assignments may be**

**given that will substitute the written reflection but not the reading assignment.** These will require more than 1 page in length.

### **Student Interviews (Critical Assessment Task – CATs)**

**(20%)** - You and one of your classmates will conduct three different student interviews based on questions provided in class. Each interview is worth 5 points. For each interview, you will pose mathematical problems to any one student at a predetermined grade level. The purpose is to get you to begin thinking about students' mathematical understanding, to learn how to effectively pose questions, and interpret the meaning of students' answers, and to provide you with an opportunity to interact with students.

### **Mathematical Resources & Lesson (Critical Assessment Task – CATs)**

**(35%)** – You will first compile resources on a predetermined mathematical topic (15%) and then design a lesson that you will present and videotape in an elementary class (20%). The purpose of this activity is to help you learn how to design effective mathematical activities, to provide you with an opportunity to begin compiling mathematical resources, and to provide an opportunity for you to practice teaching mathematics in an authentic classroom setting.

### **Curriculum Assignment (Critical Assessment Task – CATs)**

**(25%)** – Students will review the mathematics curriculum currently being used in your classroom (e.g., a textbook) at one grade level and write a short paper that investigates the curriculum alignment with the CA Content Standards and current high stakes assessments. Students will also provide their general thoughts and concerns related to the curriculum (e.g., how the curriculum might need to be altered to make strong connections between mathematical concepts and procedures).

### **Active Participation and Collaboration**

**(5%)** - Defined as actively engaging and contributing in all class discussions and activities, students will be evaluated daily. A positive attitude is an important component for establishing the definition for active participation and collaboration. In addition, the student will be expected to exhibit professional behavior and demeanor at all times.

### **Taskstream Postings (5%):**

This course is designed to help those seeking a Multiple Subject Credential develop the skills knowledge and attitudes necessary to assist schools and districts in implementing effective programs for all students. The successful candidate will be able to merge theory and practice in order to realize a comprehensive and extensive educational program for all students. Students will document their knowledge and understanding of TPE 1A (math) and TPE 2 through assignments completed in EDMS 543.

## **All University Writing Requirement**

All CSU students must demonstrate competency in writing skills as a requirement for graduation. At Cal State San Marcos, students complete the graduation writing assessment through the All-University Writing Requirement. This requirement mandates that every course at the University must have a writing component of at least 2,500 words (approximately 10 pages).

**The writing requirement for this course will be met through weekly writings, student interview reflections, the creation of a lesson plan and mathematical resources, and the curriculum analysis assignment.**

### **CSUSM Academic Honesty Policy**

Students will be expected to adhere to standards of academic honesty and integrity, as outlined in the Student Academic Honesty Policy. All written work and oral assignments must be original work. All ideas/materials that are borrowed from other sources must have appropriate references to the original sources. Any quoted material should give credit to the source and be punctuated with quotation marks.

Students are responsible for honest completion of their work including examinations. There will be no tolerance for infractions. If you believe there has been an infraction by someone in the class, please bring it to the instructor's attention. The instructor reserves the right to discipline any student for academic dishonesty in accordance with the general rules and regulations of the university. Disciplinary action may include the lowering of grades and/or the assignment of a failing grade for an exam, assignment, or the class as a whole."

**GRADING SCALE:** Grades for this course will be based on the following grading scale:

|         |             |
|---------|-------------|
| A.....  | 93% - 100 % |
| A-..... | 90% - 92%   |
|         |             |
| B+..... | 88% - 89%   |
| B.....  | 83% - 87 %  |
| B-..... | 80% - 82%   |
|         |             |
| C+..... | 78% - 79%   |
| C.....  | 73% - 77 %  |
| C-..... | 70% - 72%   |

#### **Exemplary "A" Students:**

- Demonstrate serious commitment to their learning, making full use of the learning opportunities available and searching out the implications of their learning for future use.
- Complete all assignments thoroughly and thoughtfully toward the goal of developing in-depth math projects.
- Make insightful connections between all assignments and their developing overall understanding of mathematical concepts; they continually question and examine concepts in a genuine spirit of inquiry.
- Students show a high level of achievement of course goals.

#### **"B" Students:**

- Simply comply with the course requirements and expectations.
- Complete all assignments, usually thoroughly and thoughtfully.
- Usually connect assignments to their developing overall understanding of mathematical concepts; may be satisfied with accepting their learning as it is received without deeply examining concepts or seeking a higher level of understanding.
- Students show reasonable achievement of course goals.

**“C” Students:**

- Demonstrate an inconsistent level of compliance to course requirements and expectations.
- Complete all assignments with limited thoroughness and thoughtfulness.
- Make limited connections between assignments and their developing overall understanding of mathematical concepts; may not be open to examining concepts on a deeper level and may actually dismiss the importance of such inquiry.
- Attempt, but show limited progress in achieving course goals.

**Remember! You are required to maintain a B average (3.0 GPA) in your teacher education courses to receive a teaching credential in the State of California.**

## Curriculum Review Assignment

EDMS 543

|  | <b>Developing</b>  | <b>Nearly Meets</b>   | <b>Meets</b>  | <b>Exceeds</b>   |
|--|--|---|---|--|
| <b>TPE 1, 1a</b><br>Subject Specific Pedagogical skills for MS Teaching Assignment (Teaching Mathematics in a MS Assignment) | Candidate's analysis of the curriculum will demonstrate little to no understanding of how to teach the state adopted academic content standard in mathematics.                               | Candidate's analysis of the curriculum will demonstrate some understanding of how to teach the state adopted academic content standard in mathematics.                              | Candidate's analysis of the curriculum will demonstrate considerable understanding of how to teach the state adopted academic content standard in mathematics.                              | Candidate's analysis of the curriculum will demonstrate exceptional understanding of how to teach the state adopted academic content standard in mathematics.                              |
| <b>TPE 4</b><br>Making Content Accessible  | Candidate's analysis of the curriculum will demonstrate little to no understanding in the use of pedagogical strategies that will provide all students access to the mathematics curriculum. | Candidate's analysis of the curriculum will demonstrate some understanding in the use of pedagogical strategies that will provide all students access to the mathematics curriculum | Candidate's analysis of the curriculum will demonstrate considerable understanding in the use of pedagogical strategies that will provide all students access to the mathematics curriculum | Candidate's analysis of the curriculum will demonstrate exceptional understanding in the use of pedagogical strategies that will provide all students access to the mathematics curriculum |
| <b>TPE 6, 6a, 6b</b><br>Developmentally Appropriate Teaching Practices in Grades K-3 & 4-8                                   | Candidate's analysis of the curriculum will demonstrate little to no understanding in the use of developmentally appropriate teaching practices.   | Candidate's analysis of the curriculum will demonstrate some understanding in the use of developmentally appropriate teaching practices   | Candidate's analysis of the curriculum will demonstrate considerable understanding in the use of developmentally appropriate teaching practices   | Candidate's analysis of the curriculum will demonstrate exceptional understanding in the use of developmentally appropriate teaching practices   |

Secondary TPE's for this Assignment

- TPE 9 – Instructional Planning
- TPE 10 – Instructional Time



## Lesson Presentation Assignment

EDMS 543

|  | <b>Developing</b>   | <b>Nearly Meets</b>   | <b>Meets</b>  | <b>Exceeds</b>   |
|--|---|---|---|--|
| <b>TPE 1, 1a</b><br>Subject Specific Pedagogical skills for MS Teaching Assignment (Teaching Mathematics in a Multiple Subject Assignment) | Candidates' lesson plan and presentation demonstrates little to no understanding of how to teach the state adopted academic content standard in mathematics                                   | Candidates' lesson plan and presentation demonstrates some understanding of how to teach the state adopted academic content standard in mathematics                                   | Candidates' lesson plan and presentation demonstrates considerable understanding of how to teach the state adopted academic content standard in mathematics                                   | Candidates' lesson plan and presentation demonstrates exceptional understanding of how to teach the state adopted academic content standard in mathematics                                   |
| <b>TPE 4</b><br>Making Content Accessible  | Candidates' lesson plan and presentation will demonstrate little to no understanding in the use of pedagogical strategies that will provide all students access to the mathematics curriculum | Candidates' lesson plan and presentation will demonstrate some understanding in the use of pedagogical strategies that will provide all students access to the mathematics curriculum | Candidates' lesson plan and presentation will demonstrate considerable understanding in the use of pedagogical strategies that will provide all students access to the mathematics curriculum | Candidates' lesson plan and presentation will demonstrate exceptional understanding in the use of pedagogical strategies that will provide all students access to the mathematics curriculum |
| <b>TPE 6, 6a, 6b</b><br>Developmentally Appropriate Teaching Practices – Grades K-3 & 4-8  | Candidates' lesson plan and presentation will demonstrate little to no understanding in the use of developmentally appropriate teaching practices.  | Candidates' lesson plan and presentation will demonstrate some understanding in the use of developmentally appropriate teaching practices.  | Candidates' lesson plan and presentation will demonstrate considerable understanding in the use of developmentally appropriate teaching practices.  | Candidates' lesson plan and presentation will demonstrate exceptional understanding in the use of developmentally appropriate teaching practices.  |

### Secondary TPE's for this Assignment

- TPE 2 – Monitoring Student Learning During Instruction
- TPE 5 – Student Engagement
- TPE 9 – Instructional Planning
- TPE 10 – Instructional Time
- TPE 11 – Social Environment

## Lesson Resources Assignment

EDMS 543

|   | <b>Developing</b>   | <b>Nearly Meets</b>   | <b>Meets</b>  | <b>Exceeds</b>   |
|---|---|---|---|--|
| <b>TPE 4</b><br>Making Content Accessible | Candidates' resources and descriptions will demonstrate little to no understanding of how instructional resources can help provide all students with access to a balanced and comprehensive curriculum. | Candidates' resources and descriptions will demonstrate some understanding of how instructional resources can help provide all students with access to a balanced and comprehensive curriculum. | Candidates' resources and descriptions will demonstrate considerable understanding of how instructional resources can help provide all students with access to a balanced and comprehensive curriculum. | Candidates' resources and descriptions will demonstrate exceptional understanding of how instructional resources can help provide all students with access to a balanced and comprehensive curriculum. |

Secondary TPE's for this Assignment

- TPE 1a – Subject-Specific Pedagogical Skills for MS Teaching Assignments (Teaching Mathematics in a MS Assignment)
- TPE 5 – Student Engagement

## Student Interviews Assignment

EDMS 543

|  | <b>Developing</b>   | <b>Nearly Meets</b>   | <b>Meets</b>  | <b>Exceeds</b>   |
|--|---|---|---|--|
| <b>TPE 1, 1a</b><br>Subject Specific Pedagogical skills for MS Teaching Assignment (Teaching Mathematics in a Multiple Subject Assignment) | Candidate's assessment and recommendations from the student interview demonstrates little to no understanding of how to teach the state adopted academic content standard in mathematics                            | Candidate's assessment and recommendations from the student interview demonstrates some understanding of how to teach the state adopted academic content standard in mathematics                            | Candidate's assessment and recommendations from the student interview demonstrates considerable understanding of how to teach the state adopted academic content standard in mathematics                            | Candidate's assessment and recommendations from the student interview demonstrates exceptional understanding of how to teach the state adopted academic content standard in mathematics                            |
| <b>TPE 2</b><br>Monitoring Student Learning During Instruction   | Candidate's assessment and recommendations from the student interview demonstrates little to no understanding of how to monitor student learning and how to effectively make use of this information when teaching. | Candidate's assessment and recommendations from the student interview demonstrates some understanding of how to monitor student learning and how to effectively make use of this information when teaching. | Candidate's assessment and recommendations from the student interview demonstrates considerable understanding of how to monitor student learning and how to effectively make use of this information when teaching. | Candidate's assessment and recommendations from the student interview demonstrates exceptional understanding of how to monitor student learning and how to effectively make use of this information when teaching. |
| <b>TPE 3</b><br>Interpretation and Use of Assessments  | Candidate demonstrates little to no understanding of how to effectively assess students' content knowledge through the use of student interviews.   | Candidate demonstrates some understanding of how to effectively assess students' content knowledge through the use of student interviews.   | Candidate demonstrates considerable understanding of how to effectively assess students' content knowledge through the use of student interviews.   | Candidate demonstrates exceptional understanding of how to effectively assess students' content knowledge through the use of student interviews.   |
| <b>TPE 4</b><br>Making Content Accessible  | Candidate's recommendations from the student interview demonstrates little to no understanding in the use of pedagogical strategies that will provide all students access to the mathematics curriculum             | Candidate's recommendations from the student interview demonstrates some understanding in the use of pedagogical strategies that will provide all students access to the mathematics curriculum             | Candidate's recommendations from the student interview demonstrates considerable understanding in the use of pedagogical strategies that will provide all students access to the mathematics curriculum             | Candidate's recommendations from the student interview demonstrates exceptional understanding in the use of pedagogical strategies that will provide all students access to the mathematics curriculum             |

Secondary TPE's for this Assignment

- TPE 5 – Student Engagement
- TPE 6, 6a, 6b – Developmentally Appropriate Practices in Grades K-3 & Grades 4-8.
- TPE 8 – Learning about Students and TPE 9 – Instructional Planning

| DATE     | EDMS 543 COURSE TOPICS & ASSIGNMENTS (WED.)   | READINGS (Text and Other Sources)   |
|----------|---|---|
| 8/30/06  | Course Introduction<br>Why do we do mathematics? (Big picture)<br>Conceptual vs. procedural knowledge<br>Characteristics of Effective Classrooms: Overview of Instructional Practices<br>Developing understanding—How do kids learn?<br>Teaching through problem solving<br>Discussion of Cognitively Guided Instruction  | 1- Teaching Mathematics in the Era of the NCTM Standards<br>2 - Exploring What It Means to do Mathematics<br>3 - Developing Understanding in Mathematics<br>4 -Teaching Through Problem Solving                                   |
| 9/06/06  | - Interviews<br>- Assessment – Connecting instruction to assessment<br>- How kids learn through problem solving development<br><br>- Mathematics Content Standards for California Public Schools<br><b>***</b><br><b>Group presentations of assigned standards</b>  | 5 - Planning in the Problem- Based Classroom<br>6 - Building Assessment into Instruction<br><br>This document is available on:<br><a href="http://www.cde.ca.gov/ci/ma/cf/index.asp">http://www.cde.ca.gov/ci/ma/cf/index.asp</a> |
| 9/13/06  | Special Populations: Creating Inclusive Classrooms<br>Multiple Representations and reaching every learner<br><b>Article summary/critique on Math and Special Populations due</b><br>Number Sense I:<br>What it means and how we can help children develop it.<br><b>PRACTICE INTERVIEW DUE</b>  | 7 - Teaching Mathematics Equitably to All Children<br><b>Journal article on math &amp; special needs</b><br>9 - Developing Early Number Concepts and Number Sense   |
| 9/20/06  | Number Sense II:<br>Classification of word problems for addition, subtraction, multiplication, and division.<br>How all children can construct efficient mental tools for fact mastery.<br>Number Sense III:<br>Developing understanding of place value<br><b>Place Value Interview due</b>   | 10 - Developing Meanings for the Operations<br>11 - Helping Children Master the Basic Facts<br>12 - Whole-Number Place-Value Development  |
| 9/27/06  | Number Sense IV:<br>Developing flexible methods of computation, mental strategies, and estimation.<br>Building estimation skills<br><b>***1</b><br><b>Add/Subtraction OR Multiplication/Division classroom presentation (Number Sense)</b><br><b>Addition/Subtraction OR Multiplication/Division interview due (turn in only one interview)</b><br><b>***2</b><br><b>Algebra classroom presentation</b><br>Algebraic Reasoning and Function – Exploring patterns, variables, and equations. Developing function concepts.<br><b>Algebra interview due</b> | 13 - Strategies for Whole Number Computation<br>14 – Computational Estimation with Whole Numbers<br>15 - Algebraic Thinking: Generalizations, Patterns, and Functions   |
| 10/04/06 | Fractions I:<br>Constructing understanding of fractions; fraction computation<br><b>***3</b><br><b>Fraction classroom presentation #1 (grades K-4 lesson choice)</b><br><b>Fraction interview due</b><br>Fractions II:<br><b>***4</b><br><b>Fraction classroom presentation #2 (grades 5-8 lesson choice)</b>   | 16 - Developing Fraction Concepts<br>17 - Computation with Fractions<br>18 – Decimal & Percent Concepts and Decimal Computation<br>19 – Proportional Reasoning  |
| 10/11/06 | Measurement - Customary and metric system<br><b>***5</b><br><b>Measurement classroom presentation</b><br><b>Measurement interview due</b><br>Geometry – Developing geometric reasoning and spatial sense<br><b>***6</b><br><b>Geometry classroom presentation</b><br><b>Geometry interview due</b>  | 20 - Developing Measurement Concepts<br>21 - Geometric Thinking and Geometric Concepts  |
| 10/18/06 | Probability & Data Analysis – Developing meaningful experiences in gathering and displaying statistical data.<br>Exploring concepts of chance, simple and independent events.<br><b>***7</b><br><b>Probability &amp; Data Analysis classroom presentation</b><br><b>Probability &amp; Data Analysis interview due</b><br><b>CURRICULUM ASSIGNMENT: Last day to turn in Taskstream postings</b>  | 22 - Concepts of Data Analysis<br>23 – Exploring Concepts of Probability<br>24 – Developing Concepts of Exponents, Integers, and Real Numbers   |
|          | <b>Technology</b> – This competency will be infused throughout the course.<br>Use this chapter as an ongoing reference.   | 8 – Technology and School Mathematics   |

**SB 2042 - AUTHORIZATION TO TEACH ENGLISH LEARNERS COMPETENCIES**

| <b>PART 1:<br/>LANGUAGE STRUCTURE AND<br/>FIRST- AND SECOND-LANGUAGE<br/>DEVELOPMENT</b>  | <b>PART 2:<br/>METHODOLOGY<br/>OF BILINGUAL, ENGLISH<br/>LANGUAGE DEVELOPMENT,<br/>AND CONTENT INSTRUCTION</b>                 | <b>PART 3:<br/>CULTURE AND<br/>CULTURAL DIVERSITY</b>   |
|---|--|---|
| <b>I. Language Structure and Use:<br/>Universals and Differences<br/>(including the structure of English)</b>                                   | <b>I. Theories and Methods of Bilingual<br/>Education</b>  | <b>I. The Nature of Culture</b>   |
| A. The sound systems of language<br>(phonology)   | A. Foundations   | A. Definitions of culture   |
| B. Word formation (morphology)  | B. Organizational models: What works for<br>whom?  | B. Perceptions of culture   |
| C. Syntax   | C. Instructional strategies  | C. Intra-group differences (e.g., ethnicity,<br>race, generations, and micro-cultures)              |
| D. Word meaning (semantics)   | <b>II. Theories and Methods for Instruction<br/>In and Through English</b>   | D. Physical geography and its effects on<br>culture   |
| E. Language in context  | A. Teacher delivery for <u>both</u> English<br>language development <u>and</u> content<br>instruction                          | E. Cultural congruence  |
| F. Written discourse  | B. Approaches with a focus on English<br>language development  | <b>II. Manifestations of Culture: Learning<br/>About Students</b>                                   |
| G. Oral discourse   | C. Approaches with a focus on content<br>area instruction (specially designed<br>academic instruction delivered in<br>English) | A. What teachers should learn about their<br>students   |
| H. Nonverbal communication  | D. Working with paraprofessionals  | B. How teachers can learn about their<br>students   |
| I. Language Change  |  | C. How teachers can use what they learn<br>about their students (culturally responsive<br>pedagogy) |
| <b>II. Theories and Factors in First- and<br/>Second-Language Development</b>   | <b>III. Language and Content Area<br/>Assessment</b>   | <b>III. Cultural Contact</b>  |
| A. Historical and current theories and models<br>of language analysis that have implications<br>for second-language development and<br>pedagogy | A. Purpose   | A. Concepts of cultural contact   |
| B. Psychological factors affecting first- and<br>second-language development  | B. Methods   | B. Stages of individual cultural contact  |
| C. Socio-cultural factors affecting first- and<br>second-language development   | C. State mandates  | C. The dynamics of prejudice  |
| D. Pedagogical factors affecting first- and<br>second-language development  | D. Limitations of assessment   | D. Strategies for conflict resolution   |
| E. Political factors affecting first- and second-<br>language development   | E. Technical concepts  | <b>IV. Cultural Diversity in U.S. and CA.</b>   |
|   |  | A. Historical perspectives  |
|   |  | B. Demography   |
|   |  | C. Migration and immigration  |

## Lesson Plan Format

### **I. CONSIDERATIONS BEFORE THE LESSON**

#### **Facts about the Learners**

- Who are my students and how do they learn?
- What forms of communication do my students use?

#### **Content/Context**

- Content area(s) or discipline(s)
- Grade level(s)
- Content standards addressed
- Lesson's Objectives
- Prior knowledge and skills

#### **Product/Assessments**

- In what varied authentic ways will students demonstrate accomplishment of the objectives?
- What criteria will you use to judge students' success for each objective?

#### **Management/Discipline Considerations**

- What materials and resources are needed?
- How will you incorporate technology?
- How will you handle the room arrangement?
- How will you handle student grouping?
- How will you handle student transitions and misbehavior?

### **II. OPENING THE LESSON/ INTO**

Anticipatory Set - How will you motivate and focus students?

### **III. PROCESS/STEPS OF INSTRUCTION/ THROUGH**

#### **A. Teacher Input**

1. How will you describe and model skills?
2. How will you provide examples and non-examples?
3. How will you teach to the objective(s)?
4. How will you actively involve all students?
5. What will the teacher do?
6. What will the student do?

#### **B. Guided Practice**

1. How will students practice alone?
2. How will you check for understanding?
3. What will your interventions consist of if the objectives are not being met?

#### **C. Independent Practice/Formative Assessment**

What benchmark criteria will you look for to assess if students are meeting the objectives?

#### **D. Closure/Summative Assessment**

- How will you have students summarize their learning?
- How will you assess students have met the objectives?

### **IV. AFTER THE LESSON/BEYOND**

#### **A. Transfer**

How will you structure opportunities for students to continue practice and transfer learning?

#### **B. Reflection**

1. What went well in the lesson and was it relevant and worthwhile?
  1. What evidence do you have that the lesson went well?
  2. What changes will you make to enhance learning?
  3. What benefits do these changes have for the students and your effectiveness as a teacher?