

*California Community Colleges Curriculum Alignment Project – CAP Transitional Kindergarten
Course Outline*

Title: CA Preschool Foundations & Frameworks: Math

Short Title: CA FOUN/FRAM MATH

Course Description

Introduction to the mathematics domain of the California Preschool Learning Foundations and Frameworks including the strands of number sense, algebra and functions, measurement, geometry, and mathematical reasoning. Provides strategies for implementing the curriculum frameworks developed for this domain. Applicable to required or professional development units for Child Development Permit holders, pre-school, transitional kindergarten, and early-primary teachers.

Student Learning Outcomes

Upon successful completion of this class, students will be able to:

1. Explain the roles of the California Preschool Learning Foundations and Frameworks in the education of young children and their relationship to the Desired Results Developmental (DRDP), California Common Core State Standards for kindergarten and Content Standards for California Public Schools (kindergarten).
2. Plan environments and experiences to support mathematical learning, based on the observation of children in classroom settings.
3. Articulate the teacher’s role in collaborating with families to support children’s mathematical learning.

Objectives

In this class, students will:

1. Define the roles of the CA Foundations and Frameworks: Math and their relationship to the Desired Results Developmental Profile (DRDP), California Common Core State Standards for kindergarten and Content Standards for California Public Schools (kindergarten).
2. Select and evaluate various materials for mathematics learning.
3. Suggest multiple ways to provide a mathematically rich environment.
4. Describe how the five math domains can be implemented into daily routine, classroom experiences, and in multiple places in the environment.
5. Demonstrate how to use the CA Foundations and Frameworks to plan curriculum experiences for various interests and abilities of children.
6. Describe strategies to support English language learners in developing mathematical knowledge as they concurrently acquire English.
7. Explain the role of partnership with parents and other caregivers in supporting children’s learning of mathematics.

Content

- I. Introduction to the California Preschool Learning Foundations: Mathematics

- A. Purpose and use
 - B. Relationship to the California Common Core State Standards for kindergarten and Content Standards for California Public Schools (kindergarten)
 - C. Relationship to Desired Results Developmental Profile (DRDP)
- II. Math strands
- A. Number sense
 - B. Algebra and functions
 - C. Measurement
 - D. Geometry
 - E. Mathematical reasoning
- III. Implementation of the Foundations and Frameworks
- A. Recognizing and building on preschool children’s natural interest in mathematics
 - 1. Teachable moments
 - 2. Language of math
 - B. Intentionally planned experiences
 - 1. Planning based on observation of children’s interests, skills and abilities
 - 2. Use of inquiry and exploration to foster problem solving and mathematical reasoning
 - 3. Use of daily experiences and routines as a vehicle to promote children’s mathematical knowledge
 - 4. Hands-on opportunities to explore math concepts
 - C. Mathematically rich environments
 - 1. Objects and materials to promote mathematical thinking
 - 2. Objects and materials that are relevant and meaningful to the children in your group
 - 3. Integration of math-related materials into all areas of the classroom
- IV. Supporting English language learners in developing mathematical knowledge as they concurrently acquire English
- V. Partnering with parents and other caregivers in supporting children’s’ learning of mathematics

METHODS OF EVALUATION

Assignments	Method of Evaluation
Written assignments	Students written evaluations of materials, environments, and/or teaching strategies will be assessed for developmentally appropriate practices.
Problem solving demonstrations	Student’s curriculum plans will be evaluated for their alignment with observed children’s needs.
Skill demonstrations	Student’s ability to plan experiences to support

	<p>each math strand will be evaluated for research based practices. b. Student's ability to plan experiences based on the individual needs of children will be evaluated though their ideas for curriculum development. c. Student's strategies for building partnerships with parents will be evaluated through class discussion and written reflections. d. Student's ability to plan math rich environments will be evaluated through written plans. e. Student's ability to support English language learners will be evaluated through class discussions and/or written reflections.</p>
Examinations	<p>Student's knowledge of mathematics domains will be assessed through various types of group and individual questions.</p>