

NV ECE: Math Scope and Sequence

Session 1: Standards and Vision

SESSION TITLE	SESSION OBJECTIVES
Math Series Overview	<ul style="list-style-type: none"> Articulate why Early Childhood Education in mathematics from birth-five is a priority for Nevada and nationwide Orient participants to the goals and scope and sequence for the Math Series Establish group norms for all sessions Start to build relationships with colleagues across the cohorts Experience a community builder
Setting a High Bar for Excellent Instruction in Math in Early Childhood Classrooms	<ul style="list-style-type: none"> Establish a common understanding of excellence in early childhood math instruction and its importance Understand the developmental trajectory of students from birth through five in Math and the expectations for students defined by the Nevada Infant and Toddler Early Learning Guidelines and the Nevada Pre-Kindergarten Standards in Math (Revisit) Describe how developmental levels influence classroom practice
Refining and Connecting Your Vision for Instructional Excellence	<ul style="list-style-type: none"> (Revisit) Understand the important role a Vision of Excellent Instruction plays in ensuring high quality ECE centers Understand the ways excellent literacy instruction connects to excellent math instruction and the importance of cross-cutting concepts (science, play, music, etc.) Create a Vision of Excellent Instruction for math at a classroom-level Plan for opportunities to introduce math vision to staff and invest them in it
Introducing the Tracker System	<ul style="list-style-type: none"> Revisit purpose of tracker Present system Access and register on system If time, begin to enter teacher names
Closing and Next Steps	<ul style="list-style-type: none"> Reflect on key concepts learned during the day Articulate the next steps to take prior to the next session Provide feedback on the day's session

Session 2: Math Talk

SESSION TITLE	SESSION OBJECTIVES
Opening and Reflection	<ul style="list-style-type: none"> Preview the scope of work for the day Reflect on the impact that the Vision of Excellent Instruction is having in their centers Share successes and challenges around sharing their updated Vision of Excellence with teachers Participate in Community Builder
Entering Tracker Information	<ul style="list-style-type: none"> Discuss lead teachers' initial math levels and insert into tracker Those that are not center directors choose a partner for the remaining 5 sessions to discuss tracker data

<p>Building Math Skills - Promoting Math Talk in the Classroom</p>	<ul style="list-style-type: none"> • Explain why math talk is essential to young children’s future math success • (Revisit) Understand the trajectory of oral language and math development as outlined in the research, the Infant and Toddler Early Learning Guidelines, and the Pre-Kindergarten Standards • Describe the principles of using math talk in birth through five-year-old classrooms • Understand and describe the key concepts of more or less and spatial relationships • Plan for common opportunities to utilize math talk throughout the day
<p>Practice: Using Math Talk and Observing for Math Talk</p>	<ul style="list-style-type: none"> • Practice applying math talk strategies using more or less as a critical concept and digging into spatial relationships during instructional and non-instructional time • Identify key look-fors of strong math talk in a classroom • Observe an ECE math lesson and take low-inference notes on evidence of math talk
<p>Closing and Next Steps</p>	<ul style="list-style-type: none"> • Reflect on key concepts learned during the day, revise their visions to include them, and plan how to bring to one’s center/school • Articulate the next steps to take prior to the next session • Provide feedback on the day’s session

Session 3: Number Sense

SESSION TITLE	SESSION OBJECTIVES
<p>Opening and Reflection</p>	<ul style="list-style-type: none"> • Preview the scope of work for the day • Reflect on the impact that math talk is having in their centers • Share successes and challenges around introducing math talk to teachers and implementation at their center/school • Participate in Community Builder
<p>Entering Tracker Information to Support Data-Based Decision Making</p>	<ul style="list-style-type: none"> • Enter observation data • Evaluate data to identify trends and next steps
<p>Building Math Skills - Number Sense and Related Key Concepts</p>	<ul style="list-style-type: none"> • Explain why number sense is essential to young children’s future math success • Understand and describe the key concepts of: object permanence, more, one, and numeracy (quantity, verbal, symbol) • Understand the developmental progression of number sense and what is developmentally appropriate in for students from birth through five • Plan for common opportunities to integrate number sense throughout the day
<p>Making Connections and Practice: Number Sense and Math Talk and Observing for Number Sense</p>	<ul style="list-style-type: none"> • Identify key look-fors of strong number sense development in a classroom • Practice building number sense using math talk as a key strategy and building on learning from previous session • Observe a lesson and take low-inference notes on evidence of math talk and number sense

Closing and Next Steps	<ul style="list-style-type: none"> • Reflect on key concepts learned during the day and revise their visions to include them • Articulate the next steps to take prior to the next session • Provide feedback on the day's session
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Session 4: Problem Solving and Reasoning

SESSION TITLE	SESSION OBJECTIVES
Opening and Reflection	<ul style="list-style-type: none"> • Preview the scope of work for the day • Reflect on the impact that number sense is having in their centers • Share successes and challenges connecting around introducing number sense to teachers and implementation at their center/school • Participate in Community Builder
Entering Tracker Information to Support Data-Based Decision Making	<ul style="list-style-type: none"> • Enter observation data • Evaluate data to identify trends and next steps
Building Math Skills – Problem Solving and Reasoning	<ul style="list-style-type: none"> • Explain why problem solving and reasoning is essential to young children's future math success • Understand and describe key concepts for B-5 for geometry and measurement and how they promote problem solving and reasoning skills • Plan for common opportunities to integrate problem solving and reasoning throughout the day • Practice building problem solving and reasoning skills in geometry and measurement and building on learning from previous sessions
Putting it All Together: Observation and Feedback Practice	<ul style="list-style-type: none"> • Identify key looks for of strong problem solving and reasoning in a classroom • Observe a lesson and take low-inference notes on evidence of problem solving and reasoning skills (and math talk and number sense) • Prepare for delivery of feedback to a teacher • Practice feedback delivery
Closing and Next Steps	<ul style="list-style-type: none"> • Reflect on key concepts learned during the day and revise their visions to include them • Articulate the next steps to take prior to the next session • Provide feedback on the day's session

Session 5: Math in the Environment Around Us through STEM

SESSION TITLE	SESSION OBJECTIVES
Opening and Reflection	<ul style="list-style-type: none"> • Preview the scope of work for the day • Reflect on the impact that problem solving and reasoning is having in their centers

	<ul style="list-style-type: none"> • Share successes and challenges around introducing problem solving and reasoning to teachers and implementation at their center/school • Participate in Community Builder
Entering Tracker Information to Support Data-Based Decision Making	<ul style="list-style-type: none"> • Enter observation data • Evaluate data to identify trends and next steps
Building Math Skills – Math in its “Natural Environment” and STEM	<ul style="list-style-type: none"> • Articulate the connection between science and math to young children’s future math success • Understand and describe what STEM is and how math exists in the “world around us” • Plan for and identify opportunities to connect math, science, and the world around us • Practice building students’ math skills in science lessons and as part of exploring/understanding the world around us
Putting it All Together: Observation and Feedback Practice	<ul style="list-style-type: none"> • Identify key look fors of strong math and science integration in a classroom • Observe a lesson and take low-inference notes on evidence of math and science integration (and problem solving, reasoning, math talk, and number sense) • Prepare for delivery of feedback to a teacher • Practice feedback delivery

Session 6: Putting it All Together: Integrating Learning and Play

SESSION TITLE	SESSION OBJECTIVES
Opening and Reflection	<ul style="list-style-type: none"> • Preview the scope of work for the day • Reflect on the impact that problem solving and reasoning is having in their centers • Share successes and challenges around introducing cross-cutting concepts to teachers and implementation at their center/school • Participate in Community Builder
Entering Tracker Information to Support Putting It All Together	<ul style="list-style-type: none"> • Enter observation data • Evaluate data to identify trends and next steps
Learning through Play: What It Looks Like When Done Well	<ul style="list-style-type: none"> • Explain why play is an important part of young children’s development • Understand and describe excellent play-based learning • Plan for and identify opportunities for play-based learning • Collaborate and share best practices of play-based learning with their colleagues in the cohort
Closing Reflection and Celebration	<ul style="list-style-type: none"> • Reflect on key concepts learned during the Math Series • Reflect on overall successes and challenges in using the strategies they learned throughout the course of the Math Series • Plan for next steps to continue to use and improve on the strategies learned in the coming school years and how to stay connected to their cohort

	<ul style="list-style-type: none">• Reflect on growth over the course of the Math Series• Provide feedback on the day's sessions and the Math Series as a whole• Celebrate the achievements of the Math Series cohort!
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