

**A Correlation of**



to the

**Clark County  
School District Guide for  
Benchmarks**

Grades K-5



M/M-123

## Introduction

This document demonstrates how ***Investigations in Number, Data, and Space®*** supports the Clark County School District Guide for Benchmarks. The citations within this correlation provide Investigation Curriculum Unit titles, followed by the Investigation number and Session number or Focus Time/Choice Time title. Additional citations to Classroom Routines may be included.

***Investigations in Number, Data, and Space®***, a Kindergarten through Grade 5 program, offers a complete and flexible curriculum that aligns with the NCTM principles and Standards for School Mathematics. The main teaching tool is a single resource book, called the *teacher book*, for each unit in a grade level. Students explore the central topics in depth through a series of investigations, gradually encountering and using many important mathematical ideas. ***Investigations*** offers activity-based mathematics that encourages students to think creatively, develop their own strategies, and work together. Students practice skills through games, daily routines, activities, and practice pages.

The program blends concrete materials with appropriate technology. The software provided with several ***Investigations*** units harnesses the power of computers to help students explore mathematical ideas and relationships that cannot be explored in the same way with physical materials. A balanced approach to calculator use is found in the program.

Every unit in the Investigations curriculum offers a list of related children's literature that can be used to support the mathematical ideas presented in the unit. This list of books is found in the materials list located in the front of each unit.

Developed by TERC under a grant from the National Science Foundation, ***Investigations in Number, Data, and Space®*** is comprehensive in its approach to students of diverse learning styles, students from different cultures, and students of different language groups. In an effort to give mathematical lessons a broader spectrum, students are encouraged to explore working in groups, individually and as a whole class. By incorporating these methods into everyday learning, students learn to express mathematical thinking through talking, drawing, and writing.

***Investigations in Number, Data and Space®*** was developed after three years of nationwide field-testing and includes teacher's practical suggestions, student dialogues, and teacher notes. Further information can be found on the internet at [www.scottforesman.com/investigations](http://www.scottforesman.com/investigations).

## Table of Contents

<b>Kindergarten</b>	<b>1</b>
<b>Grade One</b>	<b>47</b>
<b>Grade Two</b>	<b>77</b>
<b>Grade Three</b>	<b>112</b>
<b>Grade Four</b>	<b>142</b>
<b>Grade Five</b>	<b>184</b>

**Investigations in Number, Data, and Space  
to the  
Clark County School District Guide for Benchmarks**

**Kindergarten**

**NUMBERS, NUMBER SENSE, AND COMPUTATION**

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	<p><b>First Trimester:</b></p> <p>Compare sets of objects and describe more/less/equal [1.3]</p>	<p>Mathematical Thinking in Kindergarten Investigation 2: Choice Time, pages 32-33 Investigation 4: Observing the Students, page 57 Collecting, Counting, and Measuring Investigations 3, 4, 5, 6 How Many in All? Investigation 2: Choice Time: Grab Two Handfuls, pages 40-41 <i>All Units: Appendix: About Classroom Routines: Attendance, Counting Jar</i></p>
1.K.6	Recognize, read and write numerals, 0-10	<p>Mathematical Thinking in Kindergarten Investigations 1-3 Collecting, Counting, and Measuring Investigations 1-5 Counting Ourselves and Others Investigations 1, 3, 4 How Many in All? Investigations 1-4 <i>All Units: Appendix: About Classroom Routines: The Counting Jar</i></p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.K.7	Use ordinal positions of first, second, and third [1.7]	<p>A Teacher Note describes the distinction between ordinal and cardinal properties of numbers.</p> <p><b>References:</b>  Mathematical Thinking in Kindergarten  Investigation 2: Teacher Note, page 36  Collecting, Counting, and Measuring  Investigation 1: Teacher Note, page 16  Counting Ourselves and Others  Investigation 1: Teacher Note, page 12</p>
1.K.5	<p><b>Second Trimester:</b>  Count by ones to 10 [1.2]</p>	<p>Mathematical Thinking in Kindergarten  Investigations 1-3  Collecting, Counting, and Measuring  Investigations 1-5  Counting Ourselves and Others  Investigations 1, 3, 4  How Many in All?  Investigations 1-4  <i>All Units: Appendix: About Classroom Routines: The Counting Jar</i></p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.K.8	Match the correct number of objects with the appropriate numeral, 0-10 [1.4]	Mathematical Thinking in Kindergarten Investigations 1-3 Collecting, Counting, and Measuring Investigations 1-5 Counting Ourselves and Others Investigations 1, 3, 4 How Many in All? Investigations 1-4 <i>All Units: Appendix: About Classroom Routines: The Counting Jar</i>
1.K.7	Estimate the number of objects in a set to 10, use ordinal positions first-third [1.14]	Collecting, Counting, and Measuring Investigation 1: Teacher Note, page 16 Measuring Investigation 3: Choice Time: Grab and Count: Which Has More?, page 44 Investigation 4: Choice Time: Grab and Count: Compare, page 62 Investigation 5: Talking About Least to Most, page 71 Counting Ourselves and Others Investigation 1: Teacher Note, page 12 How Many in All? Investigation 2: Choice Time: Grab Two Handfuls <i>All Units: Appendix: About Classroom Routines: Counting Jar</i>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.K.5	<p><b>Third Trimester:</b></p> <p>Count to 20 objects to determine quantity [1.1]</p>	<p>Mathematical Thinking in Kindergarten            Investigations 1-3            Collecting, Counting, and Measuring            Investigations 1-5            Counting Ourselves and Others            Investigations 1, 3, 4            How Many in All?            Investigations 1-4  <i>All Units: Appendix: About Classroom Routines: The Counting Jar</i></p>
1.K.5	Count by ones to 20 [1.2]	<p>Mathematical Thinking in Kindergarten            Investigations 1-3            Collecting, Counting, and Measuring            Investigations 1-5            Counting Ourselves and Others            Investigations 1, 3, 4            How Many in All?            Investigations 1-4  <i>All Units: Appendix: About Classroom Routines: The Counting Jar</i></p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.K.6	Recognize number words, 0-10 [1.6]	Mathematical Thinking in Kindergarten Investigation 1 Observing the Students, page 9 Investigation 2: Observing the Students, page 33 Teacher Notes, pages 36-37 Investigation 3 Observing the Students, page 46 Collecting, Counting , and Measuring Investigation 2 How Many In All? Investigation 3
1.K.8	Match the number of objects to the correct numeral	Mathematical Thinking in Kindergarten Investigations 1-3 Collecting, Counting, and Measuring Investigations 1-5 Counting Ourselves and Others Investigations 1, 3, 4 How Many in All? Investigations 1-4 <i>All Units: Appendix: About Classroom Routines: The Counting Jar</i>



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.K.5	Compare and order whole number relationships, 0-10 [1.8]	Mathematical Thinking in Kindergarten Investigation 2 Choice Time, pages 32-33 Investigation 4 Observing the Students, page 57 Collecting, Counting, and Measuring Investigations 3, 4, 5, 6 How Many in All? Investigation 2: Choice Time: Grab Two Handfuls, pages 40-41 <i>All Units: Appendix: About Classroom Routines: Attendance, Counting Jar</i>
1.K.1	Remove objects from a set (subtractions) and describe results [1.10]	How Many in All? Investigation 3 Investigation 4 Teacher Note, pages 86-87
1.K.1	Use concrete objects to model simple sums and differences [1.12]	Collecting, Counting, and Measuring Investigation 4: Choice Time: Collect 10 Together, pages 64-65 How Many in All? Investigations 2-4 <i>All Units: Appendix: About Classroom Routines: Attendance</i>

**PATTERNS, FUNCTIONS, AND ALGEBRA**

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
2.K.1	<p><b>First Trimester:</b> Recognize, replicate, and extend repeating patterns [2.3]</p>	<p>Pattern Trains and Hopscotch Paths Investigations 1-4 <i>All Units: Appendix: About Classroom Routines: Patterns on the Pocket Chart</i></p>
2.K.1	<p>Create and describe patterns using objects and words and numbers [2.2]</p>	<p>Mathematical Thinking in Kindergarten Investigation 3 Counting Ourselves and Others Investigation 1 Activity, pages 19-23 Teacher Note, page 34 Dialogue Box, page 35 Pattern Trains and Hopscotch Paths Investigations 1-4 <i>All Units: Appendix: About Classroom Routines: Patterns on the Pocket Chart; Patterns on the Calendar</i></p>
2.K.1	<p><b>Second Trimester:</b> Sort and describe objects by similar characteristics (attributes) [2.1]</p>	<p>Mathematical Thinking in Kindergarten Investigation 1: Choice Time: Exploring Color Tiles, Pattern Blocks, Geoblocks Teacher Note: Talking About Pattern Blocks and Geoblocks, page 22 Investigation 3: Choice Time: Exploring Interlocking Cubes Investigation 4 Teacher Note, pages 61-64</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Collecting, Counting, and Measuring Investigation 3 Choice Time: Measuring Table Investigation 4: Choice Time: Comparing Names, pages 60-61 Investigation 6 Counting Ourselves and Others Investigation 1 Choice Time: Self-Portraits, pages 25-27 Choice Time: Pattern Block Grab, pages 30-32 Investigation 2 Making Shapes and Building Blocks Investigation 1: Choice Time: Book of Shapes, pages 12-13 Investigation 3 Investigation 5
2.K.4	Identify and create sets of objects with unequal amounts, describing them as having more or less [2.4]	Mathematical Thinking in Kindergarten Investigation 4 Collecting, Counting, and Measuring Investigations 3-6 How Many in All? Investigation 2: Choice Time: Grab Two Handfuls, pages 40-41

## MEASUREMENT

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
3.K.1	<p><b>Second Trimester:</b></p> <p>Compare and order objects by size and communicate their similarities and differences [3.1]</p>	<p>Collecting, Counting, and Measuring Investigations 3, 4 Investigation 5: Dialogue Box: Comparing and Ordering Towers, pp. 76-77 How Many in All? Investigation 1</p>
3.K.1	<p>Compare and order objects by size and weight [3.2]</p>	<p>Students explore the concept of weight comparison beginning in Grade 1. <b>References:</b> Collecting, Counting, and Measuring Investigations 3, 4 Investigation 5: Dialogue Box: Comparing and Ordering Towers, pp. 76-77 How Many in All? Investigation 1</p>
3.K.4	<p><b>Third Trimester:</b></p> <p>Identify and sort pennies, nickels, and dimes [3.3]</p>	<p>Students are given an opportunity to explore monetary values as they simulate the purchase of items in a classroom grocery store. <b>Reference:</b> Counting Ourselves and Others Investigation 2: Choice Time: page 50</p>
3.K.4	<p>Recite, in order, the days of the week [3.5]</p>	<p>Mathematical Thinking in Kindergarten Investigation 3 <i>All Units: Appendix: About Classroom Routines: Calendar</i></p>

## SPATIAL RELATIONSHIPS AND GEOMETRY

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
4.K.2	<p><b>First Trimester:</b></p> <p>Describe location of objects using position words such as next to, between, under, over, top, bottom, before, after [4.3]</p>	<p>In addition to physical manipulation of shapes and objects, Kindergarten students describe, name, and interpret relative positions in space through the use of <i>Shapes</i>, a software program which allows students to construct and manipulate geometric shapes, see objects move according to rules they specify, and explore rotation and reflection.</p> <p><b>References:</b>            Making Shapes and Building Blocks Investigations 2-4  <i>Shapes</i> Teacher Tutorial: pages 117-154</p>
4.K.1	<p><b>Third Trimester:</b></p> <p>Identify and describe geometric figures (sphere, cylinder, cube, cone) [4.1]</p>	<p>Mathematical Thinking in Kindergarten            Investigation 1            Choice Time:            Exploring Geoblocks            Teacher Note, page 22            Making Shapes and Building Blocks Investigations 3-5</p>
4.K.1	<p>Identify and describe two-dimensional shapes(circle, triangles, rectangles [squares]) [4.2]</p>	<p>Mathematical Thinking in Kindergarten            Investigation 1: Choice Time:            Exploring Pattern Blocks            Making Shapes and Building Blocks Investigations 1-5  <i>Shapes</i> Teacher Tutorial, pages 117-154</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
4.K.3	Identify two-dimensional figures as they appear in the environment (e.g., windows are shaped like rectangles) [4.4]	Making Shapes and Building Blocks Investigations 1

## DATA ANALYSIS

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
5.K.1	<b>Second Trimester:</b> Collect and describe data [5.1]	Mathematical Thinking in Kindergarten Investigations 1, 4 Counting Ourselves and Others Investigations 1-4 <i>All Units: Appendix: About Classroom Routines: Today's Question, Attendance</i>
	<b>Third Trimester:</b> Describe and compare information (data) on graphs made with objects, pictures, or numbers [5.2]	Mathematical Thinking in Kindergarten Investigations 1, 4 Counting Ourselves and Others Investigations 1-4 <i>All Units: Appendix: About Classroom Routines: Today's Question, Attendance</i>

**PROBLEM SOLVING**

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.K.1	<p><b>First Trimester:</b>            Develop, and apply strategies to solve a variety of mathematical problems[6.1]</p>	<p>Students select, modify, develop, and apply strategies to solve a variety of mathematical and practical problems throughout the course. For example, students recognize, construct, extend, and predict what comes next in patterns on a pocket chart and with color tiles, and apply these concepts to practical problems as they investigate patterns on the calendar.</p> <p><b>Sample References:</b>            Mathematical Thinking in Kindergarten                Investigation 3            Pattern Trains and Hopscotch Paths                Investigation 2            Collecting, Counting, and Measuring                Investigation 1            Counting Ourselves and Others                Investigation 4            Making Shapes and Building Blocks                Investigation 2            How Many in All?                Investigation 4</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.K.3	Formulate own problems; use various approaches to investigate and solve problems [6.3]	<p>Students are given a great deal of freedom to explore mathematical concepts and, in so doing, formulate their own problems and use various approaches to investigate and solve problems. For example, students explore color tiles, pattern blocks, Geoblocks, and their attributes; they recognize, describe, create, and extend patterns; and they employ a variety of approaches to counting and representing quantities.</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 1  Pattern Trains and Hopscotch Paths  Investigation 1  Collecting, Counting, and Measuring  Investigation 1  Counting Ourselves and Others  Investigation 4  Making Shapes and Building Blocks  Investigation 1  How Many in All?  Investigation 3</p>



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.K.8	Apply solutions and strategies from earlier problems to new problem situations [6.6]	<p>Students apply solutions and strategies from earlier problems to new problem situations throughout the course. For example, students develop and apply strategies for solving combining and separating story problems.</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 3  Pattern Trains and Hopscotch Paths  Investigation 2  Collecting, Counting, and Measuring  Investigation 4  Counting Ourselves and Others  Investigation 4  Making Shapes and Building Blocks  Investigation 1  How Many in All?  Investigation 3</p>
6.K.1	<p><b>Second Trimester:</b></p> <p>Develop, and apply strategies to solve a variety of mathematical problems[6.1]</p>	<p>Students select, modify, develop, and apply strategies to solve a variety of mathematical and practical problems throughout the course. For example, students recognize, construct, extend, and predict what comes next in patterns on a pocket chart and with color tiles, and apply these concepts to practical problems as they investigate patterns on the calendar.</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	<p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 3  Pattern Trains and Hopscotch Paths  Investigation 2  Collecting, Counting, and Measuring  Investigation 1  Counting Ourselves and Others  Investigation 4  Making Shapes and Building Blocks  Investigation 2  How Many in All?  Investigation 4</p>
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Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Counting Ourselves and Others Investigation 4 Making Shapes and Building Blocks Investigation 1 How Many in All? Investigation 3
6.K.8	Apply solutions and strategies from earlier problems to new problem situations [6.6]	Students apply solutions and strategies from earlier problems to new problem situations throughout the course. For example, students develop and apply strategies for solving combining and separating story problems. <b>Sample References:</b> Mathematical Thinking in Kindergarten Investigation 3 Pattern Trains and Hopscotch Paths Investigation 2 Collecting, Counting, and Measuring Investigation 4 Counting Ourselves and Others Investigation 4 Making Shapes and Building Blocks Investigation 1 How Many in All? Investigation 3

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.K.1	<p><b>Third Trimester:</b></p> <p>Develop, and apply strategies to solve a variety of mathematical problems[6.1]</p>	<p>Students select, modify, develop, and apply strategies to solve a variety of mathematical and practical problems throughout the course. For example, students recognize, construct, extend, and predict what comes next in patterns on a pocket chart and with color tiles, and apply these concepts to practical problems as they investigate patterns on the calendar.</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 3  Pattern Trains and Hopscotch Paths  Investigation 2  Collecting, Counting, and Measuring  Investigation 1  Counting Ourselves and Others  Investigation 4  Making Shapes and Building Blocks  Investigation 2  How Many in All?  Investigation 4</p>

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## MATHEMATICAL COMMUNICATION

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.K.1	<p><b>First Trimester:</b></p> <p>Discuss and exchange ideas about mathematics as a part of learning [7.1]</p>	<p>Kindergarten students discuss and exchange ideas about mathematics as a part of learning as they solve problems throughout the course. The Dialogue Box feature integrated throughout the curriculum illustrates the development of mathematical language through teacher-student guidance and student-student discussion. Students progress through the curriculum by completing investigations which consist of multiple cooperative learning activities. These explorations entail a great deal of group discussion and communication. For example, students describe patterns, collect data about their classmates, and solve story problems.</p> <p>Sample References:</p> <p>Mathematical Thinking in Kindergarten              Investigation 1          Pattern Trains and Hopscotch Paths              Investigation 1          Collecting, Counting, and Measuring              Investigation 3: Dialogue Box, pages 48-49          Counting Ourselves and Others              Investigation 2          Making Shapes and Building Blocks              Investigation 1          How Many in All?              Investigation 3</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.K.2	Use inquiry techniques (e.g., discussion, questioning, research, data gathering) to solve mathematical problems [7.2]	<p>Kindergarten students use inquiry techniques, including discussion, questioning, research, and data gathering, to solve mathematical problems throughout the course. In fact, the use of inquiry as a strategy for learning is a fundamental emphasis of the investigation-based curriculum. The teacher asks guiding questions of the students, and the students discuss ideas, question methods and results, conduct research, and gather and interpret data. In <i>Today's Question</i>, students are introduced to a recurrent data activity involving the collection and analysis of information gathered via surveys on different topics.</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 4  Pattern Trains and Hopscotch Paths  Investigation 2  Collecting, Counting, and Measuring  Investigation 3  Counting Ourselves and Others  Investigations 1-4  Making Shapes and Building Blocks  Investigation 1  How Many in All?  Investigation 1</p>



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.K.4	Use pictorial representations to identify mathematical operations and concepts [7.3]	<p>Students use pictorial representations to explain mathematical operations throughout the course. For example, students create their own counting books with pages from 0 through 6, including pictorial representations of quantities.</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 3  Pattern Trains and Hopscotch Paths  Investigation 3  Collecting, Counting, and Measuring  Investigation 1  Counting Ourselves and Others  Investigation 3  Making Shapes and Building Blocks  Investigation 2  How Many in All?  Investigation 2</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.K.7	Use physical materials, models, pictures, or writing to represent and communicate mathematical ideas [7.4]	<p>Students use process models throughout the course. They use an extensive array of manipulatives, including interlocking cubes, dot cubes, number cubes, color tiles, pattern blocks, geoblocks, containers, countable objects, clothespins, and teddy bear counters. Students use pictures to justify and explain solutions to problems, and they use calendars to develop a sense of time and to keep track of time and events.</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 3  Pattern Trains and Hopscotch Paths  Investigation 1  Collecting, Counting, and Measuring  Investigation 3  Counting Ourselves and Others  Investigation 2  Making Shapes and Building Blocks  Investigation 3  How Many in All?  Investigation 1</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.K.12	Explain and justify thinking about mathematical ideas and solutions [7.5]	<p>Students explain and justify thinking about mathematical ideas and solutions throughout the curriculum as they perform the activities for each investigation. The Dialogue Box is a feature that appears with many investigations and contains the text of discussions between teachers and students in which the teacher encourages students to describe their solution processes and justify their thinking.</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 3  Pattern Trains and Hopscotch Paths  Investigation 2  Collecting, Counting, and Measuring  Investigation 2  Counting Ourselves and Others  Investigation 3  Making Shapes and Building Blocks  Investigation 4  How Many in All?  Investigation 2</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.K.15	Use everyday language to explain thinking about strategies and solutions to mathematical problems [7.6]	<p>Students use everyday language to explain thinking about strategies and solutions to mathematical problems throughout the course. For example, the teacher and students discuss the various meanings and usages of the words “pattern” and “arrange.”</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 3  Pattern Trains and Hopscotch Paths  Investigation 1  Collecting, Counting, and Measuring  Investigation 6  Counting Ourselves and Others  Investigation 1  Making Shapes and Building Blocks  Investigation 1  How Many in All?  Investigation 3</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.K.1	<p><b>Second Trimester:</b></p> <p>Discuss and exchange ideas about mathematics as a part of learning [7.1]</p>	<p>The Dialogue Box is a feature that appears with many investigations and contains the text of discussions between teachers and students.</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 2  Pattern Trains and Hopscotch Paths  Investigation 1  Collecting, Counting, and Measuring  Investigation 5  Counting Ourselves and Others  Investigation 3  Making Shapes and Building Blocks  Investigation 3  How Many in All?  Investigation 4</p>

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7.K.7	Use physical materials, models, pictures, or writing to represent and communicate mathematical ideas [7.4]	<p>Students use process models throughout the course. They use an extensive array of manipulatives, including interlocking cubes, dot cubes, number cubes, color tiles, pattern blocks, geoblocks, containers, countable objects, clothespins, and teddy bear counters. Students use pictures to justify and explain solutions to problems, and they use calendars to develop a sense of time and to keep track of time and events.</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 3  Pattern Trains and Hopscotch Paths  Investigation 1  Collecting, Counting, and Measuring  Investigation 3  Counting Ourselves and Others  Investigation 2  Making Shapes and Building Blocks  Investigation 3  How Many in All?  Investigation 1</p>



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.K.12	Explain and justify thinking about mathematical ideas and solutions [7.5]	<p>Students explain and justify thinking about mathematical ideas and solutions throughout the curriculum as they perform the activities for each investigation. The Dialogue Box is a feature that appears with many investigations and contains the text of discussions between teachers and students in which the teacher encourages students to describe their solution processes and justify their thinking.</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 3  Pattern Trains and Hopscotch Paths  Investigation 2  Collecting, Counting, and Measuring  Investigation 2  Counting Ourselves and Others  Investigation 3  Making Shapes and Building Blocks  Investigation 4  How Many in All?  Investigation 2</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.K.15	Use everyday language to explain thinking about strategies and solutions to mathematical problems [7.6]	<p>Students use everyday language to explain thinking about strategies and solutions to mathematical problems throughout the course. For example, the teacher and students discuss the various meanings and usages of the words “pattern” and “arrange.”</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 3  Pattern Trains and Hopscotch Paths  Investigation 1  Collecting, Counting, and Measuring  Investigation 6  Counting Ourselves and Others  Investigation 1  Making Shapes and Building Blocks  Investigation 1  How Many in All?  Investigation 3</p>
7.K.1	<p><b>Third Trimester:</b></p> <p>Discuss and exchange ideas about mathematics as a part of learning [7.1]</p>	<p>The Dialogue Box is a feature that appears with many investigations and contains the text of discussions between teachers and students.</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 2  Pattern Trains and Hopscotch Paths  Investigation 1  Collecting, Counting, and Measuring  Investigation 5</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Counting Ourselves and Others Investigation 3 Making Shapes and Building Blocks Investigation 3 How Many in All? Investigation 4
7.K.2	Use inquiry techniques (e.g., discussion, questioning, research, data gathering) to solve mathematical problems [7.2]	Kindergarten students use inquiry techniques, including discussion, questioning, research, and data gathering, to solve mathematical problems throughout the course. In fact, the use of inquiry as a strategy for learning is a fundamental emphasis of the investigation-based curriculum. The teacher asks guiding questions of the students, and the students discuss ideas, question methods and results, conduct research, and gather and interpret data. Questions asked, researched, and answered by students include “Who’s here?”, “Who’s not?”, and “What did you eat for lunch?” <b>Sample References:</b> Mathematical Thinking in Kindergarten Investigation 4 Pattern Trains and Hopscotch Paths Investigation 2 Collecting, Counting, and Measuring Investigation 3 Counting Ourselves and Others Investigations 1-4 Making Shapes and Building Blocks Investigation 1 How Many in All? Investigation 1

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.K.4	Use pictorial representations to identify mathematical operations and concepts [7.3]	<p>Students use pictorial representations to explain mathematical operations throughout the course. For example, students create their own counting books with pages from 0 through 6, including pictorial representations of quantities.</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 3  Pattern Trains and Hopscotch Paths  Investigation 3  Collecting, Counting, and Measuring  Investigation 1  Counting Ourselves and Others  Investigation 3  Making Shapes and Building Blocks  Investigation 2  How Many in All?  Investigation 2</p>
7.K.7	Use physical materials, models, pictures, or writing to represent and communicate mathematical ideas [7.4]	<p>Students use process models throughout the course. They use an extensive array of manipulatives, including interlocking cubes, dot cubes, number cubes, color tiles, pattern blocks, geoblocks, containers, countable objects, clothespins, and teddy bear counters. Students use pictures to justify and explain solutions to problems, and they use calendars to develop a sense of time and to keep track of time and events.</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	<p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 3  Pattern Trains and Hopscotch Paths  Investigation 1  Collecting, Counting, and Measuring  Investigation 3  Counting Ourselves and Others  Investigation 2  Making Shapes and Building Blocks  Investigation 3  How Many in All?  Investigation 1</p>
7.K.12	Explain and justify thinking about mathematical ideas and solutions [7.5]	<p>Students explain and justify thinking about mathematical ideas and solutions throughout the curriculum as they perform the activities for each investigation. The Dialogue Box is a feature that appears with many investigations and contains the text of discussions between teachers and students in which the teacher encourages students to describe their solution processes and justify their thinking.</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 3  Pattern Trains and Hopscotch Paths  Investigation 2  Collecting, Counting, and Measuring  Investigation 2</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Counting Ourselves and Others Investigation 3 Making Shapes and Building Blocks Investigation 4 How Many in All? Investigation 2
7.K.15	Use everyday language to explain thinking about strategies and solutions to mathematical problems [7.6]	Students use everyday language to explain thinking about strategies and solutions to mathematical problems throughout the course. For example, the teacher and students discuss the various meanings and usages of the words “pattern” and “arrange.” <b>Sample References:</b> Mathematical Thinking in Kindergarten Investigation 3 Pattern Trains and Hopscotch Paths Investigation 1 Collecting, Counting, and Measuring Investigation 6 Counting Ourselves and Others Investigation 1 Making Shapes and Building Blocks Investigation 1 How Many in All? Investigation 3

## MATHEMATICAL REASONING

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.K.1	<p><b>First Trimester:</b></p> <p>Justify and explain the solutions to problems using manipulatives and physical models [8.1]</p>	<p>Students justify and explain the solutions to problems using physical materials and models throughout the course. Students use an extensive array of manipulatives, including interlocking cubes, dot cubes, number cubes, color tiles, pattern blocks, geoblocks, containers, countable objects, clothespins, and teddy bear counters.</p> <p><b>Sample References:</b>            Mathematical Thinking in Kindergarten                Investigation 2            Pattern Trains and Hopscotch Paths                Investigation 1            Collecting, Counting, and Measuring                Investigation 3            Counting Ourselves and Others                Investigation 2            Making Shapes and Building Blocks                Investigation 3            How Many in All?                Investigation 1</p>
8.K.4	<p>Use patterns and relationships to analyze mathematical situations; draw logical conclusions about mathematical problems [8.2]</p>	<p>Students use cubes, color tiles, and calendars to explore and relate patterns. They represent quantities with pictures and numerals as they develop counting strategies and relate numerals to the quantities they represent. They look at the relationships between different representations of the same set of</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	<p>data. They examine spatial relationships. They relate combinations of numbers and arrangements of objects.</p> <p><b>Sample References:</b>            Mathematical Thinking in Kindergarten                Investigation 1            Pattern Trains and Hopscotch Paths                Investigation 1            Collecting, Counting, and Measuring                Investigation 1            Counting Ourselves and Others                Investigation 1            Making Shapes and Building Blocks                Investigation 4            How Many in All?                Investigation 2</p>
8.K.1	<p><b>Second Trimester:</b></p> <p>Justify and explain the solutions to problems using manipulatives and physical models [8.1]</p>	<p>Students justify and explain the solutions to problems using physical materials and models throughout the course. Students use an extensive array of manipulatives, including interlocking cubes, dot cubes, number cubes, color tiles, pattern blocks, geoblocks, containers, countable objects, clothespins, and teddy bear counters.</p> <p><b>Sample References:</b>            Mathematical Thinking in Kindergarten                Investigation 2            Pattern Trains and Hopscotch Paths                Investigation 1            Collecting, Counting, and</p>



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Measuring Investigation 3 Counting Ourselves and Others Investigation 2 Making Shapes and Building Blocks Investigation 3 How Many in All? Investigation 1
8.K.4	Use patterns and relationships to analyze mathematical situations; draw logical conclusions about mathematical problems [8.2]	Students use cubes, color tiles, and calendars to explore and relate patterns. They represent quantities with pictures and numerals as they develop counting strategies and relate numerals to the quantities they represent. They look at the relationships between different representations of the same set of data. They examine spatial relationships. They relate combinations of numbers and arrangements of objects. <b>Sample References:</b> Mathematical Thinking in Kindergarten Investigation 1 Pattern Trains and Hopscotch Paths Investigation 1 Collecting, Counting, and Measuring Investigation 1 Counting Ourselves and Others Investigation 1 Making Shapes and Building Blocks Investigation 4 How Many in All? Investigation 2

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.K.1	<p><b>Third Trimester:</b></p> <p>Justify and explain the solutions to problems using manipulatives and physical models [8.1]</p>	<p>Students justify and explain the solutions to problems using physical materials and models throughout the course. Students use an extensive array of manipulatives, including interlocking cubes, dot cubes, number cubes, color tiles, pattern blocks, geoblocks, containers, countable objects, clothespins, and teddy bear counters.</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 2  Pattern Trains and Hopscotch Paths  Investigation 1  Collecting, Counting, and Measuring  Investigation 3  Counting Ourselves and Others  Investigation 2  Making Shapes and Building Blocks  Investigation 3  How Many in All?  Investigation 1</p>
8.K.4	<p>Use patterns and relationships to analyze mathematical situations; draw logical conclusions about mathematical problems [8.2]</p>	<p>Students use cubes, color tiles, and calendars to explore and relate patterns. They represent quantities with pictures and numerals as they develop counting strategies and relate numerals to the quantities they represent. They look at the relationships between different</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	<p>representations of the same set of data. They examine spatial relationships. They relate combinations of numbers and arrangements of objects.</p> <p><b>Sample References:</b>            Mathematical Thinking in Kindergarten                Investigation 1            Pattern Trains and Hopscotch Paths                Investigation 1            Collecting, Counting, and Measuring                Investigation 1            Counting Ourselves and Others                Investigation 1            Making Shapes and Building Blocks                Investigation 4            How Many in All?                Investigation 2</p>

**MATHEMATICAL CONNECTIONS**

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
9.K.1	<p><b>First Trimester:</b>            Link new concepts to prior knowledge [9.1]</p>	<p>Students link new concepts to prior knowledge throughout the course. For example, students link concepts and properties of geometric shapes and solids to the objects in their natural environment. They build on previously learned concepts of counting to add the number zero.</p> <p><b>Sample References:</b>            Mathematical Thinking in Kindergarten                Investigation 3</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Pattern Trains and Hopscotch Paths Investigation 2 Collecting, Counting, and Measuring Investigation 4 Counting Ourselves and Others Investigation 4 Making Shapes and Building Blocks Investigation 1 How Many in All? Investigation 4
9.K.5	Identify practical applications of mathematical principles that can be applied to other disciplines [9.2]	Students identify practical applications of mathematical principles that can be applied to other disciplines throughout the course. For example, a Teacher Note describes patterns and related concepts in children’s literature. <b>Sample References:</b> Mathematical Thinking in Kindergarten Investigation 1 Pattern Trains and Hopscotch Paths Investigation 1: Teacher Note, page 18 Collecting, Counting, and Measuring Investigation 3 Counting Ourselves and Others Investigation 3 Making Shapes and Building Blocks Investigation 1 How Many in All? Investigation 1

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
9.K.8	Identify, explain, and use mathematics in everyday life [9.4]	<p>Students identify, explain, and use mathematics in everyday life throughout the course. For example, students use calendars and apply mathematical concepts to determine the number of school days which have passed, and the number of school days which remain in the current school year. They identify geometric shapes and solids in their environment. They conduct surveys with classmates and family members.</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 4  Pattern Trains and Hopscotch Paths  Investigation 3  Collecting, Counting, and Measuring  Investigation 2  Counting Ourselves and Others  Investigation 3  Making Shapes and Building Blocks  Investigation 4  How Many in All?  Investigation 3</p>
9.K.1	<p><b>Second Trimester:</b>  Link new concepts to prior knowledge [9.1]</p>	<p>Students link new concepts to prior knowledge throughout the course. For example, students link concepts and properties of geometric shapes and solids to the objects in their natural environment. They build on previously learned concepts of counting to add the number zero.</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	<p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 3  Pattern Trains and Hopscotch Paths  Investigation 2  Collecting, Counting, and Measuring  Investigation 4  Counting Ourselves and Others  Investigation 4  Making Shapes and Building Blocks  Investigation 1  How Many in All?  Investigation 4</p>
9.K.5	Identify practical applications of mathematical principles that can be applied to other disciplines [9.2]	<p>Students identify practical applications of mathematical principles that can be applied to other disciplines throughout the course. For example, a Teacher Note describes patterns and related concepts in children’s literature.</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 1  Pattern Trains and Hopscotch Paths  Investigation 1:  Teacher Note, page 18  Collecting, Counting, and Measuring  Investigation 3  Counting Ourselves and Others  Investigation 3  Making Shapes and Building Blocks  Investigation 1  How Many in All?  Investigation 1</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
9.K.8	Identify, explain, and use mathematics in everyday life [9.4]	<p>Students identify, explain, and use mathematics in everyday life throughout the course. For example, students use calendars and apply mathematical concepts to determine the number of school days which have passed, and the number of school days which remain in the current school year. They identify geometric shapes and solids in their environment. They conduct surveys with classmates and family members.</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 4  Pattern Trains and Hopscotch Paths  Investigation 3  Collecting, Counting, and Measuring  Investigation 2  Counting Ourselves and Others  Investigation 3  Making Shapes and Building Blocks  Investigation 4  How Many in All?  Investigation 3</p>
9.K.1	<p><b>Third Trimester:</b>  Link new concepts to prior knowledge [9.1]</p>	<p>Students link new concepts to prior knowledge throughout the course. For example, students link concepts and properties of geometric shapes and solids to the objects in their natural environment. They build on previously learned concepts of counting to add the number zero.</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	<p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 3  Pattern Trains and Hopscotch Paths  Investigation 2  Collecting, Counting, and Measuring  Investigation 4  Counting Ourselves and Others  Investigation 4  Making Shapes and Building Blocks  Investigation 1  How Many in All?  Investigation 4</p>
9.K.5	Identify practical applications of mathematical principles that can be applied to other disciplines [9.2]	<p>Students identify practical applications of mathematical principles that can be applied to other disciplines throughout the course. For example, a Teacher Note describes patterns and related concepts in children’s literature.</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 1  Pattern Trains and Hopscotch Paths  Investigation 1:  Teacher Note, page 18  Collecting, Counting, and Measuring  Investigation 3  Counting Ourselves and Others  Investigation 3  Making Shapes and Building Blocks  Investigation 1  How Many in All?  Investigation 1</p>



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
9.K.8	Identify, explain, and use mathematics in everyday life [9.4]	<p>Students identify, explain, and use mathematics in everyday life throughout the course. For example, students use calendars and apply mathematical concepts to determine the number of school days which have passed, and the number of school days which remain in the current school year. They identify geometric shapes and solids in their environment. They conduct surveys with classmates and family members.</p> <p><b>Sample References:</b>  Mathematical Thinking in Kindergarten  Investigation 4  Pattern Trains and Hopscotch Paths  Investigation 3  Collecting, Counting, and Measuring  Investigation 2  Counting Ourselves and Others  Investigation 3  Making Shapes and Building Blocks  Investigation 4  How Many in All?  Investigation 3</p>

**Investigations in Number, Data, and Space  
to the  
Clark County School District Guide for Benchmarks**

**Grade One**

**NUMBERS, NUMBER SENSE, AND COMPUTATION**

<b>Nevada Standard</b>	<b>Clark County School District Guide for Benchmarks</b>	<b>Investigations in Number, Data, and Space</b>
1.1.7	<p><b>First Trimester:</b> Use ordinal positions first through tenth [1.7]</p>	<p>Students order numbers by building staircases of interlocking cubes. <b>References:</b> Mathematical Thinking at Grade 1 Investigation 2: Sessions 2-3</p>
1.1.7	<p><b>Second Trimester:</b> Estimate the number of objects in a set to 50; verify the estimate by counting; and revise estimate, as needed, based on results [1.18]</p>	<p>Building Number Sense Investigation 3: Sessions 3-4: Choice 3: Which Holds More?, page 95 Session 9, page 110 Bigger, Taller, Heavier, Smaller Investigation 2: Session 1 <i>All Units: Appendix: About Classroom Routines: Counting</i></p>
1.1.7	<p>Read and write number words, 0-10 [1.6]</p>	<p>Reading and writing number words could be incorporated into lessons involving reading math literature and writing story problems. <b>References:</b> Building Number Sense Investigation 3: Session 9 Investigation 4: Session 10 <i>All Units: Appendix: About Classroom Routines: Counting</i></p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.1.8	Explain and model the meaning of addition and subtraction [1.9]	<p>Mathematical Thinking in Grade 1  Investigation 2: Sessions 1, 4-6  Investigation 4: Sessions 1-4, 6  Investigation 5: Session 2</p> <p>Building Number Sense  Investigation 1  Session 2:  Teacher Note, pages 11-12  Session 9  Investigation 2: Sessions 1-9  Investigation 3: Sessions 5-7  Investigation 4: Sessions 1-10</p> <p>Quilt Squares and Block Towns  Investigation 3: Sessions 6-7</p> <p>Number Games and Story Problems  Investigation 1: Sessions 1-10  Investigation 2: Sessions 1-5, 10-13  Investigation 3: Sessions 1-13</p> <p><i>All Units: Appendix: About Classroom Routines: Counting</i></p>
1.1.1	Identify and model basic addition facts (sums to 10) and the corresponding subtraction facts [1.14]	<p>Mathematical Thinking in Grade 1  Investigation 2: Sessions 1, 4-6  Investigation 4: Sessions 1-4, 6  Investigation 5: Session 2</p> <p>Building Number Sense  Investigation 1  Session 2:  Teacher Note, pages 11-12  Session 9  Investigation 2: Sessions 1-9  Investigation 3: Sessions 5-7  Investigation 4: Sessions 1-10</p> <p>Quilt Squares and Block Towns  Investigation 3: Sessions 6-7</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Number Games and Story Problems Investigation 1: Sessions 1-10 Investigation 2: Sessions 1-5, 10-13 Investigation 3: Sessions 1-13 <i>All Units: Appendix: About Classroom Routines: Counting</i>
1.1.9	Identify and model a whole [1.11]	Building Number Sense Investigation 1: Session 2 Teacher Note, page 12 Bigger, Taller, Heavier, Smaller Investigation 2: Sessions 2-4 Investigation 3: Session 2
1.1.9	Identify and model $\frac{1}{2}$ [1.12]	Building Number Sense Investigation 1: Session 2 Teacher Note, page 12 Bigger, Taller, Heavier, Smaller Investigation 2: Sessions 2-4 Investigation 3: Session 2
1.1.6	<b>Third Trimester:</b> Count up to 100 objects to determine quantity [1.1]	Mathematical Thinking at Grade 1 Investigation 2: Sessions 1-6 Investigation 4: Sessions 1-6 Investigation 5: Sessions 1-4 Building Number Sense Investigation 1: Sessions 1-9 Investigation 2: Sessions 1-9 Investigation 3: Sessions 1-9 Investigation 4: Sessions 1-10 Number Games and Story Problems Investigation 2: Sessions 1-13 <i>All Units: About Classroom Routines: Counting</i>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.1.6	Count on and count back [1.2]	Mathematical Thinking in Grade 1 Investigation 2: Sessions 1-6 Investigation 4: Sessions 1-4, 6 Investigation 5: Session 2 Building Number Sense Investigation 1: Session 9 Investigation 2: Sessions 1-9 Investigation 4: Sessions 1-10 Number Games and Story Problems Investigation 1: Sessions 1-10 Investigation 2: Sessions 1-8, 10-13 Investigation 3: Sessions 1-13 <i>All Units: Appendix: About Classroom Routines: Counting</i>
1.1.6	Compare and order groups of objects and numerals less than 100 [1.3]	Mathematical Thinking at Grade 1 Investigation 2: Sessions 1-3 Building Number Sense Investigation 1: Session 2 Investigation 2: Session 3 Investigation 3: Sessions 1-7, 9 <i>All Units: Appendix: About Classroom Routines: Counting</i>
1.1.5	Use the inherent patterns in numbers to count by 1's, 2's, 5's, 10's to 100 [1.4]	Mathematical Thinking at Grade 1 Investigation 3: Session 1: Teacher Note, page 65 Investigation 4: Session 5 Building Number Sense Investigation 3 Sessions 1-2 Sessions 5-7, pages 99-100 Number Games and Story Problems Investigation 2: Sessions 1-13 <i>All Units: Appendix: About Classroom Routines: Counting</i>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.1.6	Read, write, order, and compare numerals, 0-100 [1.5]	Mathematical Thinking in Grade 1 Investigation 2: Sessions 1-6 Investigation 4: Sessions 2-6 Investigation 5: Sessions 2-4 Building Number Sense Investigation 1: Sessions 5-6, 9 Investigation 2: Sessions 1-9 Investigation 3: Sessions 1-7, 9 Investigation 4: Sessions 1-10 Number Games and Story Problems Investigation 1: Sessions 1-10 Investigation 2: Sessions 1-13 Investigation 3: Sessions 1-13 <i>All Units: Appendix: About Classroom Routines: Counting</i>
1.1.8	Use, model, and identify place value positions ones, tens) [1.8]	Students are introduced to place value concepts as they explore the 100 Chart and find combinations of ten. <b>References:</b> Building Number Sense Investigation 2: Session 2 Investigation 3: Sessions 1-2, 9 Number Games and Story Problems Investigation 2: Sessions 6-12
1.1.3	Know basic addition facts (sums to 10) and the corresponding subtraction facts [1.16]	Mathematical Thinking in Grade 1 Investigation 2: Sessions 1, 4-6 Investigation 4: Sessions 1-4, 6 Investigation 5: Session 2 Building Number Sense Investigation 1 Session 2: Teacher Note, pages 11-12 Session 9 Investigation 2: Sessions 1-9 Investigation 3: Sessions 5-7 Investigation 4: Sessions 1-10 Quilt Squares and Block Towns Investigation 3: Sessions 6-7

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Number Games and Story Problems Investigation 1: Sessions 1-10 Investigation 2: Sessions 1-5, 10-13 Investigation 3: Sessions 1-13 <i>All Units: Appendix: About Classroom Routines: Counting</i>
1.1.3	Write number sentences for the basic addition facts (sums to 10 or less) and corresponding subtraction facts [1.16]	Mathematical Thinking at Grade 1 Investigation 2: Session 4 Investigation 4: Session 4 Building Number Sense Investigation 2: Sessions 1-2, 6-8 Investigation 4: Sessions 1-5, 7-10 Number Games and Story Problems Investigation 1: Sessions 6-10 Investigation 2: Session 1 Investigation 3: Sessions 1-13
1.1.3	Use mental computation in appropriate situations to solve problems [1.19]	Mathematical Thinking in Grade 1 Investigation 2: Sessions 1, 4-6 Investigation 4: Sessions 1-4, 6 Investigation 5: Session 2 Building Number Sense Investigation 1 Session 2: Teacher Note, pages 11-12 Session 9 Investigation 2: Sessions 1-9 Investigation 3: Sessions 5-7 Investigation 4: Sessions 1-10 Quilt Squares and Block Towns Investigation 3: Sessions 6-7 Number Games and Story Problems Investigation 1: Sessions 1-10 Investigation 2: Sessions 1-5, 10-13 Investigation 3: Sessions 1-13 <i>All Units: Appendix: About Classroom Routines: Counting</i>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.1.3	Write, model, and describe one-step addition and subtraction problems [1.21]	Mathematical Thinking in Grade 1 Investigation 2: Session 4-6 Investigation 4: Sessions 4-6 Building Number Sense Investigation 2: Sessions 1-2, 6-9 Investigation 4: Sessions 1-5, 7-10 Number Games and Story Problems Investigation 1: Session 10 Investigation 2: Sessions 1-2, 13 Investigation 3: Sessions 1-13

### PATTERNS, FUNCTIONS, AND ALGEBRA

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
2.1.1	<b>First Trimester:</b> Sort and categorize objects, shapes, and numbers in a variety of ways [2.1]	Mathematical Thinking at Grade 1 Investigation 1: Sessions 1-4 Building Number Sense Investigation 1: Sessions 3-6 Survey Questions and Secret Rules Investigation 1: Sessions 1-6 Investigation 2: Sessions 3-4 Quilt Squares and Block Towns Investigation 1: Sessions 1-15 Investigation 2: Sessions 1-10 Investigation 3: Sessions 1-7 Appendix: <i>Shapes Tutorial</i> <i>All Units: About Classroom Routines:</i> <i>Exploring Data: Guess My Rule, Guess My Object</i>



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
2.1.1	Recognize, describe, extend, and create simple repeating and increasing patterns using symbols, objects, and manipulatives [2.2]	Mathematical Thinking at Grade 1 Investigation 3: Sessions 1-6 Investigation 4: Sessions 2-3, 5 Building Number Sense Investigation 3: Sessions 1-8 Investigation 4: Session 10: Activity, page 163 Survey Questions and Secret Rules Investigation 3: Sessions 2-3 Quilt Squares and Block Towns Investigation 1: Sessions 13-15 Number Games and Story Problems Investigation 2: Sessions 2, 6-9
2.1.4	Create, compare, and describe sets of objects as having more, less, or equal amounts [2.4]	Mathematical Thinking at Grade 1 Investigation 2: Sessions 1-3 Building Number Sense Investigation 1: Session 2 Investigation 2: Session 3 Investigation 3: Sessions 1-7, 9 <i>All Units: Appendix: About</i> <i>Classroom Routines: Counting</i>
2.1.4	Determine possible combinations for a given number (0-10) [2.3]	Mathematical Thinking in Grade 1 Investigation 2: Sessions 4-6 Investigation 4: Session 4 Building Number Sense Investigation 2: Sessions 1-9 Number Games and Story Problems Investigation 1: Sessions 1-10

## MEASUREMENT

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
3.1.6	<p><b>Second Trimester:</b></p> <p>Distinguish between day and night, i.e., between A.M. and P.M. [3.3]</p>	<p>Time concepts taught in the Grade 1 series include calendar features: the cyclical nature of the sequence of months and dates, units of time and relationships among them, birthday data, and problem solving.</p> <p><b>References:</b>            Survey Questions and Secret Rules            Investigation 3: Sessions 1-3  <i>All units: About Classroom</i>  <i>Routines: Understanding Time and Changes</i></p>
3.1.6	<p>Read time to the nearest hour and half hour 3.4]</p>	<p>Time concepts taught in the Grade 1 series include calendar features: the cyclical nature of the sequence of months and dates, units of time and relationships among them, birthday data, and problem solving.</p> <p><b>References:</b>            Survey Questions and Secret Rules            Investigation 3: Sessions 1-3  <i>All units: About Classroom</i>  <i>Routines: Understanding Time and Changes</i></p>
3.1.6	<p>Use a calendar to identify months, weeks, and days [3.5]</p>	<p>Survey Questions and Secret Rules            Investigation 3: Sessions 1-3  <i>All units: About Classroom</i>  <i>Routines: Understanding Time and Changes</i></p>
3.1.6	<p>Recite the months of the year in order [3.5 ]</p>	<p>Survey Questions and Secret Rules            Investigation 3: Sessions 1-3  <i>All units: About Classroom</i>  <i>Routines: Understanding Time and Changes</i></p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
3.1.1	<b>Third Trimester:</b> Compare and order objects by length and weight and communicate their similarities and differences [3.1]	Quilt Squares and Block Towns Investigation 3: Sessions 6-7 Bigger, Taller, Heavier, Smaller Investigation 1: Sessions 1-6 Investigation 3: Sessions 1-5
3.1.2	Compare and measure length and weight using non-standard units of measure [3.2]	Quilt Squares and Block Towns Investigation 3: Sessions 6-7 Bigger, Taller, Heavier, Smaller Investigation 1: Sessions 1-6 Investigation 3: Sessions 1-5
3.1.4	Determine the value of any set of pennies, nickels, and dimes [3.8]	Number Games and Story Problems Investigation 2 Session 3 Sessions 4-8: Choice Time: Collect 25¢ Together

## SPATIAL RELATIONSHIPS AND GEOMETRY

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
4.1.2	<b>Second Trimester:</b> Use position words such as middle, before, down, outside, inside, left, and right to place objects [4.1]	Building Number Sense Investigation 1: Sessions 3-4 Quilt Squares and Block Towns Investigation 1: Sessions 3-6: Choice 3: Shapes on the Computer Sessions 8-10: Choice 2: Solve Puzzles on the Computer Investigation 3: Sessions 6-7 Appendix: <i>Shapes</i> Teacher Tutorial

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
4.2.4	Identify, describe, and name geometric figures (sphere, cylinder, cube, cone) [4.2]	Building Number Sense Investigation 1: Sessions 3-4 Quilt Squares and Block Towns Investigation 2: Sessions 1-10 Investigation 3: Sessions 1-5
4.1.1	Name, sort, and sketch two-dimensional geometric shapes (circles, triangles, rectangles [squares]) regardless of position [4.3]	Mathematical Thinking in Grade 1 Investigation 1: Sessions 1-4 Building Number Sense Investigation 1: Sessions 5-6 Survey Questions and Secret Rules Investigation 1: Sessions 1-2 Investigation 2: Sessions 3-4 Quilt Squares and Block Towns Investigation 1: Sessions 1-15 Appendix: <i>Shapes</i> Teacher Tutorial
4.1.3	Identify and replicate two-dimensional designs that contain a line of symmetry [4.4]	Students using <i>Investigations in Number, Data, and Space</i> are not formally introduced to the concept of symmetry until Grade 2. Grade 1 students explore preliminary skills, including the manipulation of shapes through physical manipulation, drawing, and computer technology, as they construct murals and create designs and drawings using basic shapes. They are exposed to symmetry as they examine and manipulate geometric shapes and solids. <b>References:</b> Mathematical Thinking at Grade 1 Investigation 1: Sessions 1-4 Quilt Squares and Block Towns Investigation 1: Sessions 1-15 Investigation 2: Sessions 1-10 Investigation 3: Sessions 1-7 Appendix: <i>Shapes</i> Teacher Tutorial

## DATA ANALYSIS

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
5.1.1	<p><b>Second Trimester:</b> Collect, organize, and describe data [5.1]</p>	<p>Mathematical Thinking at Grade 1 Investigation 5: Sessions 1-6 Survey Questions and Secret Rules Investigation 1: Session 6 Investigation 2: Sessions 1-6 Investigation 3: Sessions 1-3 Investigation 4: Sessions 1-5 Bigger, Taller, Heavier, Smaller Investigation 2: Session 1 <i>All Units: Appendix: About Classroom Routines, Exploring Data, Understanding Time and Changes</i></p>
5.1.1	<p><b>Third Trimester:</b> Read and interpret information (data) on graphs made with objects, pictures, or numbers [5.2]</p>	<p>Mathematical Thinking at Grade 1 Investigation 5: Sessions 3-6 Survey Questions and Secret Rules Investigation 2: Sessions 1-2, 5-6 Investigation 3: Sessions 1-3 Investigation 4: Sessions 2-5 <i>All Units: About Classroom Routines: Exploring Data, Understanding Time and Changes</i></p>

## PROBLEM SOLVING

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.1.1	<p><b>First Trimester:</b></p> <p>Develop, and apply strategies to solve a variety of problems [6.1]</p>	<p>Students develop and apply strategies to solve a wide variety of mathematical and practical problems throughout the course. For example, students use pictures, numbers, words, and equations to solve combining and separating story problems.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 1                Investigation 2: Session 1            Building Number Sense                Investigation 4: Session 10            Survey Questions and Secret Rules                Investigation 2: Sessions 5-6            Quilt Squares and Block Towns                Investigation 3: Sessions 1-2            Number Games and Story Problems                Investigation 3: Sessions 10-12            Bigger, Taller, Heavier, Smaller                Investigation 2: Sessions 5-7</p>
6.1.2	<p>Apply previous experience and knowledge to new problem-solving situations [6.2]</p>	<p>Students apply previous experience and knowledge to new problem-solving situations throughout the course. For example, students analyze data about birthdays and ages of family members.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 1                Investigation 4: Session 5            Building Number Sense                Investigation 4: Session 6            Survey Questions and Secret Rules                Investigation 3: Session 1            Quilt Squares and Block Towns                Investigation 2: Sessions 1-2</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Number Games and Story Problems Investigation 2: Session 1 Bigger, Taller, Heavier, Smaller Investigation 1: Sessions 1-2
6.1.3	Formulate own problems, use various approaches to investigate and solve problems [6.3]	Students are given a great deal of freedom to explore mathematical concepts and, in so doing, formulate their own problems and use various approaches to investigate and solve problems. For example, students make and investigate conjectures regarding sorting rules. <b>Sample References:</b> Mathematical Thinking at Grade 1 Investigation 3: Sessions 3-4 Building Number Sense Investigation 3: Sessions 3-4 Survey Questions and Secret Rules Investigation 1: Sessions 1-2 Quilt Squares and Block Towns Investigation 2: Session 7 Number Games and Story Problems Investigation 2: Session 2 Bigger, Taller, Heavier, Smaller Investigation 1: Sessions 1-2
6.1.4	Explain and verify results [6.4]	Students explain and verify results with respect to the original problem throughout the course. For example, students estimate and verify comparisons and volumes of containers. <b>Sample References:</b> Mathematical Thinking at Grade 1 Investigation 4: Session 6 Building Number Sense Investigation 3: Sessions 3-4

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Survey Questions and Secret Rules Investigation 1: Session 5 Quilt Squares and Block Towns Investigation 3: Sessions 1-2 Number Games and Story Problems Investigation 2: Session 2 Bigger, Taller, Heavier, Smaller Investigation 2: Sessions 2-4
6.1.1	<b>Second Trimester:</b> Develop, and apply strategies to solve a variety of problems [6.1]	Students develop and apply strategies to solve a wide variety of mathematical and practical problems throughout the course. For example, students use pictures, numbers, words, and equations to solve combining and separating story problems. <b>Sample References:</b> Mathematical Thinking at Grade 1 Investigation 2: Session 1 Building Number Sense Investigation 4: Session 10 Survey Questions and Secret Rules Investigation 2: Sessions 5-6 Quilt Squares and Block Towns Investigation 3: Sessions 1-2 Number Games and Story Problems Investigation 3: Sessions 10-12 Bigger, Taller, Heavier, Smaller Investigation 2: Sessions 5-7



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.1.2	Apply previous experience and knowledge to new problem-solving situations [6.2]	<p>Students apply previous experience and knowledge to new problem-solving situations throughout the course. For example, students analyze data about birthdays and ages of family members.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 1                Investigation 4: Session 5            Building Number Sense                Investigation 4: Session 6            Survey Questions and Secret Rules                Investigation 3: Session 1            Number Games and Story Problems                Investigation 2: Session 1            Bigger, Taller, Heavier, Smaller                Investigation 1: Sessions 1-2</p>
6.1.3	Formulate own problems, use various approaches to investigate and solve problems [6.3]	<p>Students are given a great deal of freedom to explore mathematical concepts and, in so doing, formulate their own problems and use various approaches to investigate and solve problems. For example, students make and investigate conjectures regarding sorting rules.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 1                Investigation 3: Sessions 3-4            Building Number Sense                Investigation 3: Sessions 3-4            Survey Questions and Secret Rules                Investigation 1: Sessions 1-2            Quilt Squares and Block Towns                Investigation 2: Session 7            Number Games and Story Problems                Investigation 2: Session 2            Bigger, Taller, Heavier, Smaller                Investigation 1: Sessions 1-2</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.1.4	Explain and verify results [6.4]	<p>Students explain and verify results with respect to the original problem throughout the course. For example, students estimate and verify comparisons and volumes of containers.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 1                Investigation 4: Session 6            Building Number Sense                Investigation 3: Sessions 3-4            Survey Questions and Secret Rules                Investigation 1: Session 5            Number Games and Story Problems                Investigation 2: Session 2            Bigger, Taller, Heavier, Smaller                Investigation 2: Sessions 2-4</p>
6.1.1	<p><b>Third Trimester:</b></p> <p>Develop, and apply strategies to solve a variety of problems [6.1]</p>	<p>Students develop and apply strategies to solve a wide variety of mathematical and practical problems throughout the course. For example, students use pictures, numbers, words, and equations to solve combining and separating story problems.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 1                Investigation 2: Session 1            Building Number Sense                Investigation 4: Session 10            Survey Questions and Secret Rules                Investigation 2: Sessions 5-6            Quilt Squares and Block Towns                Investigation 3: Sessions 1-2            Number Games and Story Problems                Investigation 3: Sessions 10-12            Bigger, Taller, Heavier, Smaller                Investigation 2: Sessions 5-7</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.1.2	Apply previous experience and knowledge to new problem-solving situations [6.2]	<p>Students apply previous experience and knowledge to new problem-solving situations throughout the course. For example, students analyze data about birthdays and ages of family members.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 1                Investigation 4: Session 5            Building Number Sense                Investigation 4: Session 6            Survey Questions and Secret Rules                Investigation 3: Session 1            Number Games and Story Problems                Investigation 2: Session 1            Bigger, Taller, Heavier, Smaller                Investigation 1: Sessions 1-2</p>
6.1.3	Formulate own problems, use various approaches to investigate and solve problems [6.3]	<p>Students are given a great deal of freedom to explore mathematical concepts and, in so doing, formulate their own problems and use various approaches to investigate and solve problems. For example, students make and investigate conjectures regarding sorting rules.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 1                Investigation 3: Sessions 3-4            Building Number Sense                Investigation 3: Sessions 3-4            Survey Questions and Secret Rules                Investigation 1: Sessions 1-2            Quilt Squares and Block Towns                Investigation 2: Session 7            Number Games and Story Problems                Investigation 2: Session 2            Bigger, Taller, Heavier, Smaller                Investigation 1: Sessions 1-2</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.1.4	Explain and verify results [6.4]	<p>Students explain and verify results with respect to the original problem throughout the course. For example, students estimate and verify comparisons and volumes of containers.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 1                Investigation 4: Session 6            Building Number Sense                Investigation 3: Sessions 3-4            Survey Questions and Secret Rules                Investigation 1: Session 5            Quilt Squares and Block Towns                Investigation 3: Sessions 1-2            Number Games and Story Problems                Investigation 2: Session 2            Bigger, Taller, Heavier, Smaller                Investigation 2: Sessions 2-4</p>

## MATHEMATICAL COMMUNICATION

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.1.4	<p><b>First Trimester:</b></p> <p>Use pictorial representations to identify mathematical operations and concepts [7.3]</p>	<p>Students use pictorial representations to identify mathematical operations and concepts throughout the course. For example, they draw pictures to record solutions to story problems involving combinations of ten.</p> <p><b>Sample References:</b>            Mathematical Thinking in Grade 1                Investigation 5: Sessions 5-6            Building Number Sense                Investigation 2: Session 2</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Survey Questions and Secret Rules Investigation 1: Session 6 Quilt Squares and Block Towns Investigation 3: Sessions 1-2 Number Games and Story Problems Investigation 3: Session 13 Bigger, Taller, Heavier, Smaller Investigation 3: Sessions 4-5
7.1.7	Use physical materials, models, pictures, or writing to represent and communicate mathematical ideas [7.4]	Students use physical materials and models to represent and communicate mathematical ideas throughout the course. Students explore and employ a variety of physical materials, including number cubes, dot cubes, square color tiles, hundred charts, balances, pattern blocks, buttons, coins, counters, attribute logic blocks, geoblocks, tetrominoes, and snap cubes to model numbers, operations, patterns, and problem situations. They use pictorial and graphic models to organize information and to communicate mathematical ideas. <b>Sample References:</b> Mathematical Thinking at Grade 1 Investigation 5: Sessions 3-4 Building Number Sense Investigation 4: Session 6 Survey Questions and Secret Rules Investigation 1: Session 6 Quilt Squares and Block Towns Investigation 3: Session 5 Number Games and Story Problems Investigation 2: Session 13 Bigger, Taller, Heavier, Smaller Investigation 3: Sessions 4-5

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.1.12	Explain and justify thinking about mathematical ideas and solutions [7.5]	<p>Students explain and justify thinking about mathematical ideas and solutions throughout the curriculum as they perform the activities for each investigation. The Dialogue Box is a feature that appears with many investigations and contains the text of discussions between teachers and students in which the teacher encourages students to describe their solution processes and justify their thinking.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 1                Investigation 4: Session 6            Building Number Sense                Investigation 3: Sessions 3-4            Survey Questions and Secret Rules                Investigation 1: Session 5            Quilt Squares and Block Towns                Investigation 3: Sessions 1-2            Number Games and Story Problems                Investigation 2: Session 2            Bigger, Taller, Heavier, Smaller                Investigation 2: Sessions 2-4</p>
7.1.4	<p><b>Second Trimester:</b></p> <p>Use pictorial representations to identify mathematical operations and concepts [7.3]</p>	<p>Students use pictorial representations to identify mathematical operations and concepts throughout the course. For example, they draw pictures to record solutions to story problems involving combinations of ten.</p> <p><b>Sample References:</b>            Mathematical Thinking in Grade 1                Investigation 5: Sessions 5-6            Building Number Sense                Investigation 2: Session 2</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Survey Questions and Secret Rules Investigation 1: Session 6 Quilt Squares and Block Towns Investigation 3: Sessions 1-2 Number Games and Story Problems Investigation 3: Session 13 Bigger, Taller, Heavier, Smaller Investigation 3: Sessions 4-5
7.1.7	Use physical materials, models, pictures, or writing to represent and communicate mathematical ideas [7.4]	Students use physical materials and models to represent and communicate mathematical ideas throughout the course. Students explore and employ a variety of physical materials, including number cubes, dot cubes, square color tiles, hundred charts, balances, pattern blocks, buttons, coins, counters, attribute logic blocks, geoblocks, tetrominoes, and snap cubes to model numbers, operations, patterns, and problem situations. They use pictorial and graphic models to organize information and to communicate mathematical ideas. <b>Sample References:</b> Mathematical Thinking at Grade 1 Investigation 5: Sessions 3-4 Building Number Sense Investigation 4: Session 6 Survey Questions and Secret Rules Investigation 1: Session 6 Quilt Squares and Block Towns Investigation 3: Session 5 Number Games and Story Problems Investigation 2: Session 13 Bigger, Taller, Heavier, Smaller Investigation 3: Sessions 4-5

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.1.12	Explain and justify thinking about mathematical ideas and solutions [7.5]	<p>Students explain and justify thinking about mathematical ideas and solutions throughout the curriculum as they perform the activities for each investigation. The Dialogue Box is a feature that appears with many investigations and contains the text of discussions between teachers and students in which the teacher encourages students to describe their solution processes and justify their thinking.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 1                Investigation 4: Session 6            Building Number Sense                Investigation 3: Sessions 3-4            Survey Questions and Secret Rules                Investigation 1: Session 5            Quilt Squares and Block Towns                Investigation 3: Sessions 1-2            Number Games and Story Problems                Investigation 2: Session 2            Bigger, Taller, Heavier, Smaller                Investigation 2: Sessions 2-4</p>
7.1.4	<p><b>Third Trimester:</b></p> <p>Use pictorial representations to identify mathematical operations and concepts [7.3]</p>	<p>Students use pictorial representations to identify mathematical operations and concepts throughout the course. For example, they draw pictures to record solutions to story problems involving combinations of ten.</p> <p><b>Sample References:</b>            Mathematical Thinking in Grade 1                Investigation 5: Sessions 5-6            Building Number Sense                Investigation 2: Session 2</p>



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Survey Questions and Secret Rules Investigation 1: Session 6 Quilt Squares and Block Towns Investigation 3: Sessions 1-2 Number Games and Story Problems Investigation 3: Session 13 Bigger, Taller, Heavier, Smaller Investigation 3: Sessions 4-5
7.1.7	Use physical materials, models, pictures, or writing to represent and communicate mathematical ideas [7.4]	Students use physical materials and models to represent and communicate mathematical ideas throughout the course. Students explore and employ a variety of physical materials, including number cubes, dot cubes, square color tiles, hundred charts, balances, pattern blocks, buttons, coins, counters, attribute logic blocks, geoblocks, tetrominoes, and snap cubes to model numbers, operations, patterns, and problem situations. They use pictorial and graphic models to organize information and to communicate mathematical ideas. <b>Sample References:</b> Mathematical Thinking at Grade 1 Investigation 5: Sessions 3-4 Building Number Sense Investigation 4: Session 6 Survey Questions and Secret Rules Investigation 1: Session 6 Quilt Squares and Block Towns Investigation 3: Session 5 Number Games and Story Problems Investigation 2: Session 13 Bigger, Taller, Heavier, Smaller Investigation 3: Sessions 4-5

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.1.12	Explain and justify thinking about mathematical ideas and solutions [7.5]	<p>Students explain and justify thinking about mathematical ideas and solutions throughout the curriculum as they perform the activities for each investigation. The Dialogue Box is a feature that appears with many investigations and contains the text of discussions between teachers and students in which the teacher encourages students to describe their solution processes and justify their thinking.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 1                Investigation 4: Session 6            Building Number Sense                Investigation 3: Sessions 3-4            Survey Questions and Secret Rules                Investigation 1: Session 5            Quilt Squares and Block Towns                Investigation 3: Sessions 1-2            Number Games and Story Problems                Investigation 2: Session 2            Bigger, Taller, Heavier, Smaller                Investigation 2: Sessions 2-4</p>

## MATHEMATICAL REASONING

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.1.4	<p><b>First Trimester:</b></p> <p>Use patterns and relationships to analyze mathematical situations; draw logical conclusions about mathematical problems [8.2]</p>	<p>Students use patterns and relationships to analyze mathematical situations throughout the course. For example, students explore number patterns and relationships between combinations of a given number.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 1                Investigation 3: Sessions 1-6            Building Number Sense                Investigation 2: Sessions 6-8            Survey Questions and Secret Rules                Investigation 1: Session 4            Quilt Squares and Block Towns                Investigation 1: Sessions 11-15            Number Games and Story Problems                Investigation 2: Session 2            Bigger, Taller, Heavier, Smaller                Investigation 1: Sessions 5-6</p>
8.1.4	<p><b>Second Trimester:</b></p> <p>Use patterns and relationships to analyze mathematical situations; draw logical conclusions about mathematical problems [8.2]</p>	<p>Students use patterns and relationships to analyze mathematical situations throughout the course. For example, students explore number patterns and relationships between combinations of a given number.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 1                Investigation 3: Sessions 1-6            Building Number Sense                Investigation 2: Sessions 6-8            Survey Questions and Secret Rules                Investigation 1: Session 4            Quilt Squares and Block Towns                Investigation 1: Sessions 11-15</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Number Games and Story Problems Investigation 2: Session 2 Bigger, Taller, Heavier, Smaller Investigation 1: Sessions 5-6
8.1.4	<b>Third Trimester:</b> Use patterns and relationships to analyze mathematical situations; draw logical conclusions about mathematical problems [8.2]	Students use patterns and relationships to analyze mathematical situations throughout the course. For example, students explore number patterns and relationships between combinations of a given number. <b>Sample References:</b> Mathematical Thinking at Grade 1 Investigation 3: Sessions 1-6 Building Number Sense Investigation 2: Sessions 6-8 Survey Questions and Secret Rules Investigation 1: Session 4 Quilt Squares and Block Towns Investigation 1: Sessions 11-15 Number Games and Story Problems Investigation 2: Session 2 Bigger, Taller, Heavier, Smaller Investigation 1: Sessions 5-6

## MATHEMATICAL CONNECTIONS

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
9.1.8	<p><b>First Trimester:</b> Identify, explain, and use mathematics in everyday life [9.5]</p>	<p>Students identify, explain, and use mathematics in everyday life throughout the course as they perform the investigations on which the curriculum is based. In addition to the following sample references, every unit of study concludes with a section entitled, “About Classroom Routines.” The pages in this section include suggestions for applying mathematical concepts and skills to everyday situations in the classroom. Students practice counting routines, examine attendance and weather data, conduct surveys, and explore the calendar.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 1                Investigation 5: Sessions 1-6            Building Number Sense                Investigation 4: Sessions 1-10            Survey Questions and Secret Rules                Investigation 3: Sessions 1-3            Quilt Squares and Block Towns                Investigation 3: Sessions 1-7            Number Games and Story Problems                Investigation 3: Sessions 1-13            Bigger, Taller, Heavier, Smaller                Investigation 2: Session 1</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
9.1.8	<p><b>Second Trimester:</b></p> <p>Identify, explain, and use mathematics in everyday life [9.5]</p>	<p>Students identify, explain, and use mathematics in everyday life throughout the course as they perform the investigations on which the curriculum is based. In addition to the following sample references, every unit of study concludes with a section entitled, "About Classroom Routines." The pages in this section include suggestions for applying mathematical concepts and skills to everyday situations in the classroom. Students practice counting routines, examine attendance and weather data, conduct surveys, and explore the calendar.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 1  Investigation 5: Sessions 1-6  Building Number Sense  Investigation 4: Sessions 1-10  Survey Questions and Secret Rules  Investigation 3: Sessions 1-3  Quilt Squares and Block Towns  Investigation 3: Sessions 1-7  Number Games and Story Problems  Investigation 3: Sessions 1-13  Bigger, Taller, Heavier, Smaller  Investigation 2: Session 1</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
9.1.8	<p><b>Third Trimester:</b></p> <p>Identify, explain, and use mathematics in everyday life [9.5]</p>	<p>Students identify, explain, and use mathematics in everyday life throughout the course as they perform the investigations on which the curriculum is based. In addition to the following sample references, every unit of study concludes with a section entitled, "About Classroom Routines." The pages in this section include suggestions for applying mathematical concepts and skills to everyday situations in the classroom. Students practice counting routines, examine attendance and weather data, conduct surveys, and explore the calendar.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 1  Investigation 5: Sessions 1-6  Building Number Sense  Investigation 4: Sessions 1-10  Survey Questions and Secret Rules  Investigation 3: Sessions 1-3  Quilt Squares and Block Towns  Investigation 3: Sessions 1-7  Number Games and Story Problems  Investigation 3: Sessions 1-13  Bigger, Taller, Heavier, Smaller  Investigation 2: Session 1</p>

**Investigations in Number, Data, and Space  
to the  
Clark County School District Guide for Benchmarks**

**Grade Two**

**NUMBERS, NUMBER SENSE, AND COMPUTATION**

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.2.7	<p><b>First Trimester:</b></p> <p>Use ordinal positions first through twentieth [1.5]</p>	<p>While Grade 2 students are not explicitly instructed in the use of ordinal numbers, they are exposed to these expressions as part of the natural course of communication in a mathematics class. They explore the concepts of order and sequence on the Hundred Number Wall Chart and on timelines.</p> <p><b>References:</b>            Putting Together and Taking Apart            Investigation 2: Sessions 1-4            Investigation 5: Sessions 2-3, 6, 8            Timelines and Rhythm Patterns            Investigation 1: Sessions 1-5</p>
1.2.5	<p>Use the inherent patterns in numbers to skip count by 2's, 5's, and 10's to 100 [1.7]</p>	<p>Mathematical Thinking at Grade 2            Investigation 2: Session 6            Investigation 4: Sessions 1-4            Investigation 5: Sessions 4-5            Coins, Coupons, and Combinations            Investigation 2: Sessions 1-10</p>
1.2.1	<p>Identify and model basic addition facts (sums to 18) and the corresponding subtraction facts [1.2.1]</p>	<p>Mathematical Thinking at Grade 2            Investigation 1: Session 1            Investigation 2: Sessions 1-6, 8            Investigation 4: Sessions 1, 5            Investigation 5: Sessions 1-3            Coins, Coupons, and Combinations            Investigation 1: Sessions 1-11            Investigation 2: Session 10</p>



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Investigation 3: Sessions 1-5 Investigation 4: Sessions 2-4 Putting Together and Taking Apart Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-8
1.2.3	Generate and solve one-step addition and subtraction problems based on practical situations [1.23]	Mathematical Thinking at Grade 2 Investigation 1: Session 1 Investigation 2: Sessions 1-6, 8 Investigation 4: Sessions 1, 5 Investigation 5: Sessions 1-3 Coins, Coupons, and Combinations Investigation 1: Sessions 1-11 Investigation 2: Session 10 Investigation 3: Sessions 1-5 Investigation 4: Sessions 2-4 Putting Together and Taking Apart Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-8
1.2.7	<b>Second Trimester:</b> Read and write number words (0-20) [1.9]	Mathematical Thinking at Grade 2 Investigation 4: Session 1: Teacher Note, page 83 Coins, Coupons, and Combinations Investigation 1: Session 1: Activity, page 7 Investigation 1: Sessions 4-5: Activity, pages 24-25
1.2.7	Estimate the number of objects in a set to 20 [1.22]	Mathematical Thinking at Grade 2 Investigation 2: Session 6 Coins, Coupons, and Combinations Investigation 1: Session 7, pages 34-35 Investigation 2: Session 10

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.2.7	Use estimation and mental computation in appropriate situations to solve problems [1.24]	Mathematical Thinking at Grade 2 Investigation 1: Session 1 Investigation 2: Sessions 1-3, 6, 8 Investigation 4: Sessions 1, 5 Investigation 5: Session 3 Coins, Coupons, and Combinations Investigation 1: Sessions 1-11 Investigation 2: Session 1-6, 10 Investigation 3: Sessions 1-5 Investigation 4: Sessions 2-4 Putting Together and Taking Apart Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-8
1.2.1	Use basic fact strategies for addition and subtraction (doubles, doubles + 1 etc.) and recall basic addition facts (sums to 18) and the corresponding subtraction facts [1.16]	Mathematical Thinking at Grade 2 Investigation 1: Session 1 Investigation 2: Sessions 1-6, 8 Investigation 4: Sessions 1, 5 Investigation 5: Sessions 1-3 Coins, Coupons, and Combinations Investigation 1: Sessions 1-11 Investigation 2: Session 10 Investigation 3: Sessions 1-5 Investigation 4: Sessions 2-4 Putting Together and Taking Apart Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-8
1.2.4	Add and subtract money amounts [1.19]	Mathematical Thinking at Grade 2 Investigation 4: Session 2 Coins, Coupons, and Combinations Investigation 2: Sessions 6-9 Putting Together and Taking Apart Investigation 2: Sessions 5-6 Investigation 4: Sessions 3-4

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.2.4	Use decimals to show money amounts [1.14]	<p>Students view money in terms of whole numbers of cents, and explore combinations of coins and cents that can be traded for \$1 or for \$2. Students may be exposed to decimals as they explore the calculator as a computational tool.</p> <p><b>References:</b>  Coins, Coupons, and Combinations  Investigation 1: Session 7, pages 33-34  Investigation 2: Sessions 6-9  Putting Together and Taking Apart  Investigation 2: Sessions 5-6  Investigation 4: Sessions 3-4: Choice Time, page 100; Follow-Up, page 101</p>
1.2.9	Identify, model, and label fractions as part of a whole; denominators 2, 4, and 8 [1.11]	Shapes, Halves, and Symmetry Investigation 3: Sessions 1-8
1.2.6	<p><b>Third Trimester:</b></p> <p>Read, write, order, and compare numbers from 0-999 [1.1]</p>	<p>Mathematical Thinking at Grade 2  Investigation 1: Session 1  Investigation 2: Sessions 1-6, 8  Investigation 4: Sessions 1, 5  Investigation 5: Sessions 1-3  Coins, Coupons, and Combinations  Investigation 1: Sessions 1-11  Investigation 2: Session 10  Investigation 3: Sessions 1-5  Investigation 4: Sessions 2-4  Putting Together and Taking Apart  Investigation 1: Sessions 1-6  Investigation 2: Sessions 1-7  Investigation 3: Sessions 1-5  Investigation 4: Sessions 1-4  Investigation 5: Sessions 1-8  Timelines and Rhythm Patterns  Investigation 1: Sessions 1-5</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.2.8	Use, model, and identify place value positions (ones, tens, and hundreds) [1.8]	Coins, Coupons, and Combinations Investigation 3: Sessions 1-2 Investigation 4: Sessions 1-4 Putting Together and Taking Apart Investigation 1: Session 1 Investigation 2: Sessions 1-7 Investigation 4: Sessions 2-4 Investigation 5: Sessions 2-3, 6
1.2.2	Add and subtract multi-digit numbers, without regrouping [1.17]	Mathematical Thinking at Grade 2 Investigation 2: Sessions 1, 6 Investigation 4: Session 1 Investigation 5: Session 3 Coins, Coupons, and Combinations Investigation 1: Sessions 7, 10 Investigation 2: Sessions 3, 10 Investigation 3: Sessions 1-5 Investigation 4: Sessions 2-5 Putting Together and Taking Apart Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-4, 7 Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-8

**PATTERNS, FUNCTIONS, AND ALGEBRA**

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
2.2.3	<p><b>First Trimester:</b></p> <p>Use variables and open number sentences to express relationships [2.4]</p>	<p>Students use pictures and manipulatives to represent known and unknown quantities in numerical problems as they investigate the operations of addition and subtraction of whole numbers and solve combining and separating problems. Additionally, students solve Problems with a Missing Part.</p> <p><b>References:</b></p> <p>Mathematical Thinking at Grade 2            Investigation 1: Session 1            Investigation 2: Sessions 1-3, 6, 8            Investigation 4: Sessions 1-5            Investigation 5: Sessions 1-3</p> <p>Coins, Coupons, and Combinations            Investigation 1: Sessions 1-11            Investigation 2: Session 10            Investigation 3: Sessions 1-5            Investigation 4: Sessions 2-4</p> <p>Putting Together and Taking Apart            Investigation 1: Sessions 1-6            Investigation 2: Sessions 1-7            Investigation 3: Sessions 1-5            Investigation 4: Sessions 1-4</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
2.2.2 2.2.4	Represent mathematical situations using numbers, symbols, and words [2.6]	Mathematical Thinking at Grade 2 Investigation 1: Session 1 Investigation 2: Sessions 1-3, 6, 8 Investigation 4: Sessions 1-5 Investigation 5: Sessions 1-3 Coins, Coupons, and Combinations Investigation 1: Sessions 1-11 Investigation 2: Session 10 Investigation 3: Sessions 1-5 Investigation 4: Sessions 2-4 Putting Together and Taking Apart Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-8
2.2.1	<b>Second Trimester:</b> Recognize, describe, extend, and create repeating and increasing patterns using symbols, objects, manipulatives, and calculations [2.2]	Mathematical Thinking at Grade 2 Investigation 2: Session 6 Investigation 4: Sessions 1-4 Investigation 5: Sessions 4-5 Coins, Coupons, and Combinations Investigation 2: Sessions 1-5, 10 Investigation 3: Session 1, pages 91 and 93 Investigation 4: Session 1 Investigation 4: Sessions 2-4: Choice 3: 100 Chart, pages 116-117 Shapes, Halves, and Symmetry Investigation 1: Sessions 2-8 Investigation 3: Sessions 3-5, page 85 Investigation 4: Sessions 1-7 Putting Together and Taking Apart Investigation 2: Sessions 1-2 Timelines and Rhythm Patterns Investigation 2: Sessions 1-5

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
2.2.4	Generate and solve problems based on various numerical sentences [2.5]	Mathematical Thinking at Grade 2 Investigation 1: Session 1 Investigation 2: Session 8 Investigation 4: Sessions 1-2, 5 Investigation 5: Session 3 Coins, Coupons, and Combinations Investigation 1: Sessions 1, 4-10 Investigation 2: Session 10 Investigation 3: Sessions 1-5 Putting Together and Taking Apart Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-8
2.2.1	<b>Third Trimester:</b> Use patterns and their extensions to solve problems [2.3]	Mathematical Thinking at Grade 2 Investigation 2: Session 6 Investigation 4: Sessions 1-4 Investigation 5: Sessions 4-5 Coins, Coupons, and Combinations Investigation 2: Sessions 1-5, 10 Investigation 3: Session 1, pages 91 and 93 Investigation 4: Session 1 Investigation 4: Sessions 2-4: Choice 3: 100 Chart, pages 116-117 Shapes, Halves, and Symmetry Investigation 1: Sessions 2-8 Investigation 3: Sessions 3-5, page 85 Investigation 4: Sessions 1-7 Putting Together and Taking Apart Investigation 2: Sessions 1-2 Timelines and Rhythm Patterns Investigation 2: Sessions 1-5

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
2.2.7	Model, explain, and solve a number sentence involving addition and subtraction [2.7]	Mathematical Thinking at Grade 2 Investigation 1: Session 1 Investigation 2: Session 8 Investigation 4: Sessions 1-2, 5 Investigation 5: Session 3 Coins, Coupons, and Combinations Investigation 1: Sessions 1, 4-10 Investigation 2: Session 10 Investigation 3: Sessions 1-5 Putting Together and Taking Apart Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-8

## MEASUREMENT

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
3.2.1	<b>Second Trimester:</b> Compare and order objects by various measurable attributes including time, temperature, length, weight, capacity and area [3.1]	Shapes, Halves, and Symmetry Investigation 2: Session 2 How Long? How Far? Investigation 1: Sessions 1-8 Investigation 2: Sessions 4-8 Timelines and Rhythm Patterns Investigation 1: Sessions 1-6
3.2.2	Compare objects to standard whole units such as inches, yards, centimeters, and meters to identify the objects as greater than, less than, or equal to the given units [3.2]	Grade 2 students explore linear measurement using direct and indirect comparison, nonstandard units, and <i>GeoLogo</i> software. They construct, compare, and measure simple paths in both on-computer and off-computer activities. <b>References:</b> How Long? How Far? Investigation 1: Sessions 1-8 Investigation 2: Sessions 1-8



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
3.2.6	Read time to nearest quarter hour; distinguish between day and night i.e., A.M. and P.M. [3.6]	<p>Time-related activities described in the Grade 2 course include discussion of the daily schedule at school each day, identification of relevant clock times and durations, the setting of a timer to go off at specified intervals, the development of a schedule of important times at home, comparison of important times in different students' days, descriptions of types of clocks students have in their homes, and the creation of a timeline of a student's life, called a Life Line. Investigative sessions involve sequencing events in time, comparing durations of time within a day, representing events in time, and interpreting traditional representations of time.</p> <p><b>References:</b>  Timelines and Rhythm Patterns  Investigation 1: Sessions 1-6  Investigation 2: Sessions 4-5  <i>All Units: Appendix: About Classroom Routines: Time and Time Again</i></p>
3.2.4	<p><b>Third Trimester:</b></p> Determine the value of any given set of coins and bills [3.7]	<p>Mathematical Thinking at Grade 2  Investigation 4: Session 2  Coins, Coupons, and Combinations  Investigation 2: Sessions 6-9  Putting Together and Taking Apart  Investigation 2: Sessions 5-6  Investigation 4: Sessions 3-4  Choice Time, page 100  Follow-Up, page 101</p>

## SPATIAL RELATIONSHIPS AND GEOMETRY

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
4.2.1	<p><b>Second Trimester:</b></p> <p>Describe, and compare two-dimensional shapes (circles, triangles, rectangles [squares]) regardless of position [4.1]</p>	<p>Mathematical Thinking at Grade 2 Investigation 1: Sessions 1-3 Investigation 3: Sessions 1-6 Appendix: <i>Shapes</i> Teacher Tutorial</p> <p>Shapes, Halves, and Symmetry Investigation 1: Sessions 1-8 Investigation 2: Sessions 1-6 Investigation 3: Sessions 1-8 Investigation 4: Sessions 1-7</p>
4.2.2	Identify congruent shapes [4.3]	Shapes, Halves, and Symmetry Investigation 3: Sessions 3-5
4.2.2	Compare the size (larger and smaller) of similar two-dimensional figures such as circles, and triangles [4.4]	Shapes, Halves, and Symmetry Investigation 2: Session 2 Investigation 3: Sessions 3-5
4.2.3	Identify figures with symmetry as they appear in the environment [4.6]	<p>Mathematical Thinking at Grade 2 Appendix: <i>Shapes</i> Teacher Tutorial</p> <p>Shapes, Halves, and Symmetry Investigation 4: Sessions 1-7</p>
4.2.3	Create two-dimensional designs that contain a line of symmetry [4.7]	<p>Mathematical Thinking at Grade 2 Appendix: <i>Shapes</i> Teacher Tutorial</p> <p>Shapes, Halves, and Symmetry Investigation 4: Sessions 1-7</p>
4.2.4	Identify, name, sort, describe, compare, and contrast two- and three-dimensional geometric figures such as circle/sphere, square/cube, and triangle/pyramid [4.8]	<p>Mathematical Thinking at Grade 2 Investigation 3: Sessions 1-2</p> <p>Shapes, Halves, and Symmetry Investigation 1: Sessions 2-3 Build the Geoblock, pages 17-19, 21</p> <p>Investigation 1: Sessions 6-8, page 40</p>

## DATA ANALYSIS

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
5.2.1	<p><b>Third Trimester:</b> Collect, organize, record, and explain classification of data using concrete materials [5.1]</p>	<p>Mathematical Thinking at Grade 2 Investigation 2: Session 6 Investigation 5: Sessions 1-6 Coins, Coupons, and Combinations Investigation 1: Session 11 Investigation 2: Session 10 Does It Walk, Crawl, or Swim? Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-4 Investigation 3: Sessions 1-3 Investigation 4: Sessions 1-3 How Many Pockets? How Many Teeth? Investigation 1: Sessions 1-5 Investigation 2: Sessions 1-6 Investigation 3: Sessions 1-5 Timelines and Rhythm Patterns Investigation 1: Sessions 1-6 <i>All Units: Appendix: About Classroom Routines: How Many Pockets?</i></p>

## PROBLEM SOLVING

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.2.1	<p><b>First Trimester:</b> Develop, and apply strategies to solve a variety of problems [6.1]</p>	<p>Students develop and apply strategies to solve a variety of mathematical and practical problems throughout the course. For example, students explore strategies for creating and representing symmetrical figures.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 2                Investigation 3: Session 6            Coins, Coupons, and Combinations                Investigation 1: Sessions 8-9            Does It Walk, Crawl, or Swim?                Investigation 1: Sessions 1-2            Shapes, Halves, and Symmetry                Investigation 4: Sessions 5-6            Putting Together and Taking Apart                Investigation 3: Session 1            How Long? How Far?                Investigation 1: Session 8            How Many Pockets? How Many Teeth?                Investigation 1: Sessions 2-3            Timelines and Rhythm Patterns                Investigation 2: Sessions 2-3</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.2.2	Apply previous experience and knowledge to new problem-solving situations [6.2]	<p>Students apply previous experience and knowledge to new problem-solving situations throughout the course. For example, students learn to use Venn diagrams to organize data while considering two attributes at a time.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 2                Investigation 1: Sessions 2-3            Coins, Coupons, and Combinations                Investigation 3: Sessions 4-5            Does It Walk, Crawl, or Swim?                Investigation 1: Session 6            Shapes, Halves, and Symmetry                Investigation 3: Sessions 7-8            Putting Together and Taking Apart                Investigation 4: Session 2            How Long? How Far?                Investigation 2: Sessions 6-8            How Many Pockets? How Many Teeth?                Investigation 2: Sessions 1-2            Timelines and Rhythm Patterns                Investigation 1: Sessions 1-2</p>
6.2.3	Formulate own problems; use various approaches to investigate and solve problems [6.3]	<p>Students are given a great deal of freedom to explore mathematical concepts and, in so doing, formulate their own problems and use various approaches to investigate and solve problems. For example, students make and investigate conjectures regarding the identity of mystery photos.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 2                Investigation 2: Sessions 4-5            Coins, Coupons, and Combinations                Investigation 1: Sessions 4-5</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	<p>Does It Walk, Crawl, or Swim?            Investigation 1: Sessions 1-2</p> <p>Shapes, Halves, and Symmetry            Investigation 1: Sessions 2-3</p> <p>Putting Together and Taking Apart            Investigation 2: Session 1</p> <p>How Long? How Far?            Investigation 1: Sessions 2-4</p> <p>How Many Pockets? How Many Teeth?            Investigation 2: Session 6</p> <p>Timelines and Rhythm Patterns            Investigation 2: Session 4</p>
6.2.4	Explain and verify results [6.4]	<p>Students explain and verify results with respect to the original problem throughout the course. For example, students describe strategies and verify results when solving story problems involving combining, separating, comparing, or finding a missing part.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 2            Investigation 3: Sessions 3-4</p> <p>Coins, Coupons, and Combinations            Investigation 2: Sessions 4-5</p> <p>Does It Walk, Crawl, or Swim?            Investigation 2: Sessions 3-4</p> <p>Shapes, Halves, and Symmetry            Investigation 2: Session 3:            Dialogue Box, pages 60-61</p> <p>Putting Together and Taking Apart            Investigation 1: Session 2:            Dialogue Box, pages 26-27</p> <p>How Many Pockets? How Many Teeth?            Investigation 3: Session 5</p> <p>Timelines and Rhythm Patterns            Investigation 1: Sessions 1-2:            Dialogue Box, page 13</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.2.1	<p><b>Second Trimester:</b></p> <p>Develop, and apply strategies to solve a variety of problems [6.1]</p>	<p>Students develop and apply strategies to solve a variety of mathematical and practical problems throughout the course. For example, students explore strategies for creating and representing symmetrical figures.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 2  Investigation 3: Session 6  Coins, Coupons, and Combinations  Investigation 1: Sessions 8-9  Does It Walk, Crawl, or Swim?  Investigation 1: Sessions 1-2  Shapes, Halves, and Symmetry  Investigation 4: Sessions 5-6  Putting Together and Taking Apart  Investigation 3: Session 1  How Long? How Far?  Investigation 1: Session 8  How Many Pockets? How Many Teeth?  Investigation 1: Sessions 2-3  Timelines and Rhythm Patterns  Investigation 2: Sessions 2-3</p>
6.2.2	<p>Apply previous experience and knowledge to new problem-solving situations [6.2]</p>	<p>Students apply previous experience and knowledge to new problem-solving situations throughout the course. For example, students learn to use Venn diagrams to organize data while considering two attributes at a time.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 2  Investigation 1: Sessions 2-3  Coins, Coupons, and Combinations  Investigation 3: Sessions 4-5  Does It Walk, Crawl, or Swim?  Investigation 1: Session 6</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Shapes, Halves, and Symmetry Investigation 3: Sessions 7-8 Putting Together and Taking Apart Investigation 4: Session 2 How Long? How Far? Investigation 2: Sessions 6-8 How Many Pockets? How Many Teeth? Investigation 2: Sessions 1-2 Timelines and Rhythm Patterns Investigation 1: Sessions 1-2
6.2.3	Formulate own problems; use various approaches to investigate and solve problems [6.3]	Students are given a great deal of freedom to explore mathematical concepts and, in so doing, formulate their own problems and use various approaches to investigate and solve problems. For example, students make and investigate conjectures regarding the identity of mystery photos. <b>Sample References:</b> Mathematical Thinking at Grade 2 Investigation 2: Sessions 4-5 Coins, Coupons, and Combinations Investigation 1: Sessions 4-5 Does It Walk, Crawl, or Swim? Investigation 1: Sessions 1-2 Shapes, Halves, and Symmetry Investigation 1: Sessions 2-3 Putting Together and Taking Apart Investigation 2: Session 1 How Long? How Far? Investigation 1: Sessions 2-4 How Many Pockets? How Many Teeth? Investigation 2: Session 6 Timelines and Rhythm Patterns Investigation 2: Session 4



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.2.4	Explain and verify results [6.4]	<p>Students explain and verify results with respect to the original problem throughout the course. For example, students describe strategies and verify results when solving story problems involving combining, separating, comparing, or finding a missing part.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 2                Investigation 3: Sessions 3-4            Coins, Coupons, and Combinations                Investigation 2: Sessions 4-5            Does It Walk, Crawl, or Swim?                Investigation 2: Sessions 3-4            Shapes, Halves, and Symmetry                Investigation 2: Session 3:            Dialogue Box, pages 60-61            Putting Together and Taking Apart                Investigation 1: Session 2:            Dialogue Box, pages 26-27            How Long? How Far?                Investigation 1: Session 8            How Many Pockets? How Many Teeth?                Investigation 3: Session 5            Timelines and Rhythm Patterns                Investigation 1: Sessions 1-2:            Dialogue Box, page 13</p>
6.2.1	<p><b>Third Trimester:</b>            Develop, and apply strategies to solve a variety of problems [6.1]</p>	<p>Students develop and apply strategies to solve a variety of mathematical and practical problems throughout the course. For example, students explore strategies for creating and representing symmetrical figures.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 2                Investigation 3: Session 6</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Coins, Coupons, and Combinations Investigation 1: Sessions 8-9 Does It Walk, Crawl, or Swim? Investigation 1: Sessions 1-2 Shapes, Halves, and Symmetry Investigation 4: Sessions 5-6 Putting Together and Taking Apart Investigation 3: Session 1 How Long? How Far? Investigation 1: Session 8 How Many Pockets? How Many Teeth? Investigation 1: Sessions 2-3 Timelines and Rhythm Patterns Investigation 2: Sessions 2-3
6.2.2	Apply previous experience and knowledge to new problem-solving situations [6.2]	Students apply previous experience and knowledge to new problem-solving situations throughout the course. For example, students learn to use Venn diagrams to organize data while considering two attributes at a time. <b>Sample References:</b> Mathematical Thinking at Grade 2 Investigation 1: Sessions 2-3 Coins, Coupons, and Combinations Investigation 3: Sessions 4-5 Does It Walk, Crawl, or Swim? Investigation 1: Session 6 Shapes, Halves, and Symmetry Investigation 3: Sessions 7-8 Putting Together and Taking Apart Investigation 4: Session 2 How Long? How Far? Investigation 2: Sessions 6-8 How Many Pockets? How Many Teeth? Investigation 2: Sessions 1-2 Timelines and Rhythm Patterns Investigation 1: Sessions 1-2

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.2.3	Formulate own problems; use various approaches to investigate and solve problems [6.3]	<p>Students are given a great deal of freedom to explore mathematical concepts and, in so doing, formulate their own problems and use various approaches to investigate and solve problems. For example, students make and investigate conjectures regarding the identity of mystery photos.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 2  Investigation 2: Sessions 4-5  Coins, Coupons, and Combinations  Investigation 1: Sessions 4-5  Does It Walk, Crawl, or Swim?  Investigation 1: Sessions 1-2  Shapes, Halves, and Symmetry  Investigation 1: Sessions 2-3  Putting Together and Taking Apart  Investigation 2: Session 1  How Long? How Far?  Investigation 1: Sessions 2-4  How Many Pockets? How Many Teeth?  Investigation 2: Session 6  Timelines and Rhythm Patterns  Investigation 2: Session 4</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.2.4	Explain and verify results [6.4]	<p>Students explain and verify results with respect to the original problem throughout the course. For example, students describe strategies and verify results when solving story problems involving combining, separating, comparing, or finding a missing part.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 2  Investigation 3: Sessions 3-4  Coins, Coupons, and Combinations  Investigation 2: Sessions 4-5  Does It Walk, Crawl, or Swim?  Investigation 2: Sessions 3-4  Shapes, Halves, and Symmetry  Investigation 2: Session 3:  Dialogue Box, pages 60-61  Putting Together and Taking Apart  Investigation 1: Session 2:  Dialogue Box, pages 26-27  How Long? How Far?  Investigation 1: Session 8  How Many Pockets? How Many Teeth?  Investigation 3: Session 5  Timelines and Rhythm Patterns  Investigation 1: Sessions 1-2:  Dialogue Box, page 13</p>

## MATHEMATICAL COMMUNICATION

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.2.4	<p><b>First Trimester:</b></p> <p>Use pictorial representations to identify mathematical operations and concepts [7.3]</p>	<p>Students use pictorial representations to identify mathematical operations and concepts throughout the course. For example, they draw rectangles based on classmates' descriptions.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 2            Investigation 1: Session 1, page 7            Coins, Coupons, and Combinations            Investigation 2:            Session 1, page 60            Does It Walk, Crawl, or Swim?            Investigation 1: Session 6            Shapes, Halves, and Symmetry            Investigation 2: Session 6            Putting Together and Taking Apart            Investigation 3:            Session 2, page 78            How Long? How Far?            Investigation 2: Session 1            How Many Pockets? How Many Teeth?            Investigation 3: Session 5            Timelines and Rhythm Patterns            Investigation 1: Sessions 1-2</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.2.7	Use physical materials and models to represent and communicate mathematical ideas [7.4]	<p>Students use physical materials and models to represent mathematical ideas throughout the course. Students use number cubes, dot cubes, square color tiles, hundred charts, balances, pattern blocks, buttons, coins, counters, attribute logic blocks, geoblocks, tetrominoes, and snap cubes to model numbers, operations, patterns, and problem situations.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 2  Investigation 2: Sessions 4-5  Coins, Coupons, and Combinations  Investigation 2: Session 6  Does It Walk, Crawl, or Swim?  Investigation 4: Sessions 1-3  Shapes, Halves, and Symmetry  Investigation 1: Sessions 6-8  Putting Together and Taking Apart  Investigation 2: Sessions 5-6  How Long? How Far?  Investigation 2: Sessions 2-3  How Many Pockets? How Many Teeth?  Investigation 2: Sessions 1-2  Timelines and Rhythm Patterns  Investigation 2: Sessions 2-3</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.2.12	Explain and justify thinking about mathematical ideas and solutions [7.5]	<p>Students explain and justify thinking about mathematical ideas and solutions throughout the curriculum as they perform the activities for each investigation. The Dialogue Box is a feature that appears with many investigations and contains the text of discussions between teachers and students in which the teacher encourages students to describe their solution processes and justify their thinking.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 2  Investigation 4: Session 1  Coins, Coupons, and Combinations  Investigation 2: Sessions 4-5  Does It Walk, Crawl, or Swim?  Investigation 2: Sessions 3-4  Shapes, Halves, and Symmetry  Investigation 2: Session 3  Putting Together and Taking Apart  Investigation 3: Session 1  How Long? How Far?  Investigation 1: Session 8  How Many Pockets? How Many Teeth?  Investigation 1: Sessions 4-5  Timelines and Rhythm Patterns  Investigation 1: Sessions 4-5</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.2.4	<p><b>Second Trimester:</b></p> <p>Use pictorial representations to identify mathematical operations and concepts [7.3]</p>	<p>Students use pictorial representations to identify mathematical operations and concepts throughout the course. For example, they draw rectangles based on classmates' descriptions.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 2  Investigation 1: Session 1, page 7  Coins, Coupons, and Combinations  Investigation 2:  Session 1, page 60  Does It Walk, Crawl, or Swim?  Investigation 1: Session 6  Shapes, Halves, and Symmetry  Investigation 2: Session 6  Putting Together and Taking Apart  Investigation 3:  Session 2, page 78  How Long? How Far?  Investigation 2: Session 1  How Many Pockets? How Many Teeth?  Investigation 3: Session 5  Timelines and Rhythm Patterns  Investigation 1: Sessions 1-2</p>



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.2.7	Use physical materials and models to represent and communicate mathematical ideas [7.4]	<p>Students use physical materials and models to represent mathematical ideas throughout the course. Students use number cubes, dot cubes, square color tiles, hundred charts, balances, pattern blocks, buttons, coins, counters, attribute logic blocks, geoblocks, tetrominoes, and snap cubes to model numbers, operations, patterns, and problem situations.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 2  Investigation 2: Sessions 4-5  Coins, Coupons, and Combinations  Investigation 2: Session 6  Does It Walk, Crawl, or Swim?  Investigation 4: Sessions 1-3  Shapes, Halves, and Symmetry  Investigation 1: Sessions 6-8  Putting Together and Taking Apart  Investigation 2: Sessions 5-6  How Long? How Far?  Investigation 2: Sessions 2-3  How Many Pockets? How Many Teeth?  Investigation 2: Sessions 1-2  Timelines and Rhythm Patterns  Investigation 2: Sessions 2-3</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.2.12	Explain and justify thinking about mathematical ideas and solutions [7.5]	<p>Students explain and justify thinking about mathematical ideas and solutions throughout the curriculum as they perform the activities for each investigation. The Dialogue Box is a feature that appears with many investigations and contains the text of discussions between teachers and students in which the teacher encourages students to describe their solution processes and justify their thinking.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 2  Investigation 4: Session 1  Coins, Coupons, and Combinations  Investigation 2: Sessions 4-5  Does It Walk, Crawl, or Swim?  Investigation 2: Sessions 3-4  Shapes, Halves, and Symmetry  Investigation 2: Session 3  Putting Together and Taking Apart  Investigation 3: Session 1  How Long? How Far?  Investigation 1: Session 8  How Many Pockets? How Many Teeth?  Investigation 1: Sessions 4-5  Timelines and Rhythm Patterns  Investigation 1: Sessions 4-5</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.2.4	<p><b>Third Trimester:</b></p> <p>Use pictorial representations to identify mathematical operations and concepts [7.3]</p>	<p>Students use pictorial representations to identify mathematical operations and concepts throughout the course. For example, they draw rectangles based on classmates' descriptions.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 2  Investigation 1: Session 1, page 7  Coins, Coupons, and Combinations  Investigation 2:  Session 1, page 60  Does It Walk, Crawl, or Swim?  Investigation 1: Session 6  Shapes, Halves, and Symmetry  Investigation 2: Session 6  Putting Together and Taking Apart  Investigation 3:  Session 2, page 78  How Long? How Far?  Investigation 2: Session 1  How Many Pockets? How Many Teeth?  Investigation 3: Session 5  Timelines and Rhythm Patterns  Investigation 1: Sessions 1-2</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.2.7	Use physical materials and models to represent and communicate mathematical ideas [7.4]	<p>Students use physical materials and models to represent mathematical ideas throughout the course. Students use number cubes, dot cubes, square color tiles, hundred charts, balances, pattern blocks, buttons, coins, counters, attribute logic blocks, geoblocks, tetrominoes, and snap cubes to model numbers, operations, patterns, and problem situations.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 2  Investigation 2: Sessions 4-5  Coins, Coupons, and Combinations  Investigation 2: Session 6  Does It Walk, Crawl, or Swim?  Investigation 4: Sessions 1-3  Shapes, Halves, and Symmetry  Investigation 1: Sessions 6-8  Putting Together and Taking Apart  Investigation 2: Sessions 5-6  How Long? How Far?  Investigation 2: Sessions 2-3  How Many Pockets? How Many Teeth?  Investigation 2: Sessions 1-2  Timelines and Rhythm Patterns  Investigation 2: Sessions 2-3</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.2.12	Explain and justify thinking about mathematical ideas and solutions [7.5]	<p>Students explain and justify thinking about mathematical ideas and solutions throughout the curriculum as they perform the activities for each investigation. The Dialogue Box is a feature that appears with many investigations and contains the text of discussions between teachers and students in which the teacher encourages students to describe their solution processes and justify their thinking.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 2  Investigation 4: Session 1  Coins, Coupons, and Combinations  Investigation 2: Sessions 4-5  Does It Walk, Crawl, or Swim?  Investigation 2: Sessions 3-4  Shapes, Halves, and Symmetry  Investigation 2: Session 3  Putting Together and Taking Apart  Investigation 3: Session 1  How Long? How Far?  Investigation 1: Session 8  How Many Pockets? How Many Teeth?  Investigation 1: Sessions 4-5  Timelines and Rhythm Patterns  Investigation 1: Sessions 4-5</p>

## MATHEMATICAL REASONING

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.2.4	<p><b>First Trimester:</b></p> <p>Use patterns and relationships to analyze mathematical situations [8.2]</p>	<p>Students use patterns and relationships to analyze mathematical situations throughout the course. For example, students relate addition and subtraction as they solve “Problems with a Missing Part.”</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 2                Investigation 2: Session 1            Coins, Coupons, and Combinations                Investigation 4: Session 1            Does It Walk, Crawl, or Swim?                Investigation 1: Sessions 4-5            Shapes, Halves, and Symmetry                Investigation 1: Sessions 4-5            How Long? How Far?                Investigation 1: Sessions 2-4:                Dialogue Box, page 27            How Many Pockets? How Many Teeth?                Investigation 2: Session 3            Timelines and Rhythm Patterns                Investigation 2: Session 5</p>
8.2.4	<p><b>Second Trimester:</b></p> <p>Use patterns and relationships to analyze mathematical situations [8.2]</p>	<p>Students use patterns and relationships to analyze mathematical situations throughout the course. For example, students relate addition and subtraction as they solve “Problems with a Missing Part.”</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 2                Investigation 2: Session 1            Coins, Coupons, and Combinations                Investigation 4: Session 1</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	<p>Does It Walk, Crawl, or Swim? Investigation 1: Sessions 4-5</p> <p>Shapes, Halves, and Symmetry Investigation 1: Sessions 4-5</p> <p>Putting Together and Taking Apart Investigation 3: Session 2</p> <p>How Long? How Far? Investigation 1: Sessions 2-4: Dialogue Box, page 27</p> <p>How Many Pockets? How Many Teeth? Investigation 2: Session 3</p> <p>Timelines and Rhythm Patterns Investigation 2: Session 5</p>
8.2.4	<p><b>Third Trimester:</b></p> <p>Use patterns and relationships to analyze mathematical situations [8.2]</p>	<p>Students use patterns and relationships to analyze mathematical situations throughout the course. For example, students relate addition and subtraction as they solve “Problems with a Missing Part.”</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 2 Investigation 2: Session 1</p> <p>Coins, Coupons, and Combinations Investigation 4: Session 1</p> <p>Does It Walk, Crawl, or Swim? Investigation 1: Sessions 4-5</p> <p>Shapes, Halves, and Symmetry Investigation 1: Sessions 4-5</p> <p>Putting Together and Taking Apart Investigation 3: Session 2 Dialogue Box, page 27</p> <p>How Many Pockets? How Many Teeth? Investigation 2: Session 3</p> <p>Timelines and Rhythm Patterns Investigation 2: Session 5</p>

## MATHEMATICAL CONNECTIONS

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
9.2.8	<p><b>First Trimester:</b> Identify, explain, and use mathematics in everyday life [9.5]</p>	<p>Students identify, explain, and use mathematics to solve problems in everyday life throughout the course as they perform the investigations on which the curriculum is based. In one session, students construct timelines of their lives and of “a special day.” In addition to the following sample references, every unit of study concludes with a section entitled, “About Classroom Routines.” The pages in this section include suggestions for applying mathematical concepts and skills to everyday situations in the classroom. Students keep track of the number of days they have been in school, they collect data on how many pockets students are wearing on a given day, and they investigate concepts of time.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 2                Investigation 5: Sessions 1-6            Coins, Coupons, and Combinations                Investigation 3: Sessions 1-5            Does It Walk, Crawl, or Swim?                Investigation 4: Sessions 1-3            Shapes, Halves, and Symmetry                Investigation 1: Session 1            Putting Together and Taking Apart                Investigation 1: Sessions 1-6            How Long? How Far?                Investigation 1: Session 8            How Many Pockets? How Many Teeth?                Investigation 3: Sessions 1-5            Timelines and Rhythm Patterns                Investigation 1: Session 3</p>



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
9.2.8	<p><b>Second Trimester:</b></p> <p>Identify, explain, and use mathematics in everyday life [9.5]</p>	<p>Students identify, explain, and use mathematics to solve problems in everyday life throughout the course as they perform the investigations on which the curriculum is based. In one session, students construct timelines of their lives and of “a special day.” In addition to the following sample references, every unit of study concludes with a section entitled, “About Classroom Routines.” The pages in this section include suggestions for applying mathematical concepts and skills to everyday situations in the classroom. Students keep track of the number of days they have been in school, they collect data on how many pockets students are wearing on a given day, and they investigate concepts of time.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 2  Investigation 5: Sessions 1-6  Coins, Coupons, and Combinations  Investigation 3: Sessions 1-5  Does It Walk, Crawl, or Swim?  Investigation 4: Sessions 1-3  Shapes, Halves, and Symmetry  Investigation 1: Session 1  Putting Together and Taking Apart  Investigation 1: Sessions 1-6  How Long? How Far?  Investigation 1: Session 8  How Many Pockets? How Many Teeth?  Investigation 3: Sessions 1-5  Timelines and Rhythm Patterns  Investigation 1: Session 3</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
9.2.8	<p><b>Third Trimester:</b></p> <p>Identify, explain, and use mathematics in everyday life [9.5]</p>	<p>Students identify, explain, and use mathematics to solve problems in everyday life throughout the course as they perform the investigations on which the curriculum is based. In one session, students construct timelines of their lives and of “a special day.” In addition to the following sample references, every unit of study concludes with a section entitled, “About Classroom Routines.” The pages in this section include suggestions for applying mathematical concepts and skills to everyday situations in the classroom. Students keep track of the number of days they have been in school, they collect data on how many pockets students are wearing on a given day, and they investigate concepts of time.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 2  Investigation 5: Sessions 1-6  Coins, Coupons, and Combinations  Investigation 3: Sessions 1-5  Does It Walk, Crawl, or Swim?  Investigation 4: Sessions 1-3  Putting Together and Taking Apart  Investigation 1: Sessions 1-6  How Long? How Far?  Investigation 1: Session 8  How Many Pockets? How Many Teeth?  Investigation 3: Sessions 1-5  Timelines and Rhythm Patterns  Investigation 1: Session 3</p>

**Investigations in Number, Data, and Space  
to the  
Clark County School District Guide for Benchmarks**

**Grade Three**

**NUMBERS, NUMBER SENSE, AND COMPUTATION**

<b>Nevada Standard</b>	<b>Clark County School District Guide for Benchmarks</b>	<b>Investigations in Number, Data, and Space</b>
1.3.7	<p><b>First Trimester:</b> Round numbers to nearest tens and hundreds to determine reasonableness of answers [1.6]</p>	<p>From Paces to Feet Ten-Minute Math: Estimation and Number Sense Up and Down the Number Line Ten-Minute Math: Estimation and Number Sense Combining and Comparing Investigation 3: Sessions 1-2 Ten-Minute Math: Estimation and Number Sense</p>
1.3.1	<p>Immediately recall and use addition and subtraction facts [1.18]</p>	<p>Mathematical Thinking at Grade 3 Investigation 2: Sessions 1-7 Investigation 3: Sessions 3-4 Investigation 4: Session 1 Ten-Minute Math: Calendar Math Up and Down the Number Line Investigation 1: Sessions 1-8 Combining and Comparing Investigation 1: Sessions 1-3 Investigation 2: Sessions 1-2 Investigation 3: Sessions 1-3 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-3</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.3.5	Model and explain multiplication using repeated addition, skip counting, and arrays [1.9]	<p>Things That Come in Groups            Investigation 1: Sessions 1-4            Investigation 2: Sessions 1-6            Investigation 3: Sessions 1-5            Investigation 4: Sessions 1-4            Investigation 5: Sessions 1-4            Ten-Minute Math: Counting Around the Class</p> <p>Landmarks in the Hundreds            Investigation 1: Sessions 1-7            Investigation 2: Sessions 1-6            Ten-Minute Math: Counting Around the Class</p>
1.3.5	Model and explain division including subtraction model, grouping model, and arrays [1.10]	<p>Things That Come in Groups            Investigation 1: Sessions 1-3            Investigation 3: Session 5            Investigation 4: Sessions 1-4            Ten-Minute Math: Counting Around the Class</p> <p>Landmarks in the Hundreds            Investigation 1: Sessions 2-7            Investigation 2: Sessions 1-6            Ten-Minute Math: Counting Around the Class</p>
1.3.2	<p><b>Second Trimester:</b></p> <p>Add and subtract multi-digit numbers with regrouping [1.21]</p>	<p>Mathematical Thinking at Grade 3            Investigation 2: Sessions 1-7            Investigation 3: Sessions 3-4            Investigation 4: Session 1            Ten-Minute Math: Calendar Math</p> <p>Up and Down the Number Line            Investigation 1: Sessions 1-8</p> <p>Combining and Comparing            Investigation 1: Sessions 1-3            Investigation 2: Sessions 1-2            Investigation 3: Sessions 1-3            Investigation 4: Sessions 1-4            Investigation 5: Sessions 1-3            Ten-Minute Math: Estimation and Number Sense</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.3.3	Generate and solve two-step addition and subtraction and one-step multiplication problems based on practical situations using pencil and paper, mental computation, and estimation [1.31]	<p>Mathematical Thinking at Grade 3</p> <p>Investigation 2: Sessions 5-7</p> <p>Investigation 3: Sessions 3-4</p> <p>Ten-Minute Math: Calendar Math</p> <p>Things That Come in Groups</p> <p>Investigation 1: Sessions 1-4</p> <p>Investigation 3: Sessions 1-2</p> <p>Investigation 4: Sessions 1-4</p> <p>Investigation 5: Sessions 1-4</p> <p>Ten-Minute Math: Counting</p> <p>Around the Class</p> <p>Landmarks in the Hundreds</p> <p>Investigation 1: Sessions 6-7</p> <p>Investigation 2: Sessions 4-6</p> <p>Ten-Minute Math: Counting</p> <p>Around the Class</p> <p>Up and Down the Number Line</p> <p>Investigation 1: Sessions 1-8</p> <p>Combining and Comparing</p> <p>Investigation 1: Sessions 1-3</p> <p>Investigation 2: Sessions 1-2</p> <p>Investigation 3: Sessions 1-3</p> <p>Investigation 4: Sessions 3-4</p> <p>Investigation 5: Sessions 1-3</p>
1.3.1	Immediately recall and use basic facts of multiplication through the 10's [1.19]	<p>Things That Come in Groups</p> <p>Investigation 1: Sessions 1-4</p> <p>Investigation 2: Sessions 1-6</p> <p>Investigation 3: Sessions 1-5</p> <p>Investigation 4: Sessions 1-4</p> <p>Investigation 5: Sessions 1-4</p> <p>Ten-Minute Math: Counting</p> <p>Around the Class</p> <p>Landmarks in the Hundreds</p> <p>Investigation 1: Sessions 1-7</p> <p>Investigation 2: Sessions 1-6</p> <p>Ten-Minute Math: Counting</p> <p>Around the Class</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.3.1	Recall and use facts of division through the 10's [1.20]	Things That Come in Groups Investigation 1: Sessions 1-3 Investigation 3: Session 5 Investigation 4: Sessions 1-4 Ten-Minute Math: Counting Around the Class Landmarks in the Hundreds Investigation 1: Sessions 2-7 Investigation 2: Sessions 1-6 Ten-Minute Math: Counting Around the Class
1.4.1	Divide a two-digit number by a one-digit number without a remainder [1.25]	Landmarks in the Hundreds Investigation 1: Sessions 1-7 Investigation 2: Sessions 1-6 Ten-Minute Math: Counting Around the Class
1.3.6	<b>Third Trimester:</b> Read, write, order, and compare numbers (0-10,000) [1.1]	Mathematical Thinking at Grade 3 Investigation 1: Sessions 1-3 Investigation 2: Sessions 2-7 Investigation 3: Sessions 3-4 Investigation 4: Session 2 Things That Come in Groups Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-6 Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-4 Flips, Turns, and Area Investigation 1: Session 4 Ten-Minute Math: Broken Calculator Landmarks in the Hundreds Investigation 1: Sessions 1-7 Investigation 2: Sessions 1-3 Investigation 3: Sessions 1-3 Ten-Minute Math: Counting Around the Class

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Combining and Comparing Investigation 1: Sessions 1-3 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-3 Fair Shares Ten-Minute Math: Broken Calculator
1.3.8	Use, model, and identify place value positions up to 10,000 [1.5]	Grade 3 students explore concepts of place value as they construct and investigate patterns on hundred and thousand charts. They learn the significance of the decimal point and examine decimal place value in relation to the calculator and problems involving money. Counting by tens and hundreds supports students' familiarity with the base-ten system. <b>References:</b> Mathematical Thinking at Grade 3 Investigation 1: Sessions 1-3 Investigation 4: Session 2 Landmarks in the Hundreds Investigation 2: Sessions 1-3 Investigation 3: Session 1 Ten-Minute Math: Counting Around the Class Combining and Comparing Investigation 4: Sessions 3-4
1.3.9	Model, sketch, and label fractions with denominators to 10 [1.11]	Flips, Turns, and Areas Investigation 2: Sessions 1-3 Turtle Paths Investigation 2: Sessions 1-2 Fair Shares Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-3

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.3.9	Write fractions with numerals and with number words [1.12]	Flips, Turns, and Areas Investigation 2: Sessions 1-3 Turtle Paths Investigation 2: Sessions 1-2 Fair Shares Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-3
1.3.4	Add and subtract decimals using money as a model [1.29]	Mathematical Thinking at Grade 3 Investigation 2: Sessions 5-7 Combining and Comparing Investigation 3: Sessions 1-2
1.4.3	Multiply a two- or three-digit number by a one-digit number with or without regrouping [1.21]	Things That Come in Groups Investigation 5: Sessions 1-4 Ten-Minute Math: Counting Around the Class Landmarks in the Hundreds Investigation 2: Sessions 5-6 Ten-Minute Math: Counting Around the Class
1.4.3	Add, subtract and multiply whole numbers with and without regrouping	Mathematical Thinking at Grade 3 Investigation 2: Sessions 1-7 Investigation 3: Sessions 3-4 Investigation 4: Session 1 Ten-Minute Math: Calendar Math Up and Down the Number Line Investigation 1: Sessions 1-8 Combining and Comparing Investigation 1: Sessions 1-3 Investigation 2: Sessions 1-2 Investigation 3: Sessions 1-3 Investigation 4: Sessions 1-4 Investigation 5: Sessions 1-3 Ten-Minute Math: Estimation and Number Sense



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	<p>Things That Come in Groups  Investigation 1: Sessions 1-4  Investigation 2: Sessions 1-6  Investigation 3: Sessions 1-5  Investigation 4: Sessions 1-4  Investigation 5: Sessions 1-4  Ten-Minute Math: Counting Around the Class</p> <p>Landmarks in the Hundreds  Investigation 1: Sessions 1-7  Investigation 2: Sessions 1-6  Ten-Minute Math: Counting Around the Class</p>

**PATTERNS, FUNCTIONS, AND ALGEBRA**

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
2.3.1	<p><b>First Trimester:</b>  Recognize, describe, and create repeating and increasing patterns using numbers [2.2]</p>	<p>Mathematical Thinking at Grade 3  Investigation 1: Sessions 2-3  Investigation 2: Sessions 5-7</p> <p>Things That Come in Groups  Investigation 2: Sessions 1-6  Investigation 5: Session 1  Ten-Minute Math: Counting Around the Class</p> <p>Landmarks in the Hundreds  Investigation 1: Sessions 1-5  Investigation 2:  Sessions 1-3, 5-6:  Teacher Note, page 49  Ten-Minute Math: Counting Around the Class</p> <p>Fair Shares  Investigation 2: Sessions 5-6</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
2.3.1	Use numbers, patterns, and their extensions to solve problems [2.4]	Mathematical Thinking at Grade 3 Investigation 1: Sessions 2-3 Investigation 2: Sessions 5-7 Things That Come in Groups Investigation 2: Sessions 1-6 Investigation 5: Session 1 Ten-Minute Math: Counting Around the Class Landmarks in the Hundreds Investigation 1: Sessions 1-5 Investigation 2: Sessions 1-3, 5-6: Teacher Note, page 49 Ten-Minute Math: Counting Around the Class Fair Shares Investigation 2: Sessions 5-6
2.3.3	Identify missing terms and missing numbers in open number sentences involving in addition and subtraction number facts [2.5]	Students identify missing terms and numbers in open number sentences involving multiplication and division number facts. Also, students solve “missing information” problems by describing possible operations (addition or subtraction) and amounts of change given a starting point and an ending point. <b>References:</b> Things That Come in Groups Investigation 1 Session 2 Session 3, page 15 Session 4, page 17 Investigation 4: Sessions 1-4 Up and Down the Number Line Investigation 1: Sessions 6-7

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
2.3.4	Complete number sentences with the appropriate words and symbols for addition, subtraction, less than, greater than, and equal to (+, -, <, >, =) [2.6]	Mathematical Thinking at Grade 3 Investigation 2: Sessions 1-7 Investigation 3: Sessions 3-4: Dialogue Box, page 67 Investigation 4: Session 1 Ten-Minute Math: Calendar Math Combining and Comparing Investigation 1: Sessions 1-3 Investigation 3: Session 3 Investigation 4: Session 2

## MEASUREMENT

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
3.3.6	<p><b>First Trimester:</b></p> <p>Read time to the nearest minute using digital and analog clocks and identify elapsed time. [3.7]</p>	<p>Grade 3 students plan the activities for a party that will begin at 5:00 PM and end at 7:00 PM. Students give the starting time and duration for each activity.</p> <p><b>Reference:</b> Combining and Comparing Investigation 3: Session 3</p>
3.3.2	<p><b>Second Trimester:</b></p> <p>Select and use appropriate units of measurement; measure to required degree of accuracy and record results [3.1]</p>	<p>From Paces to Feet Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-3 Investigation 4: Sessions 1-3</p> <p>Turtle Paths Investigation 2: Sessions 1-2, 5-6 Investigation 3: Sessions 1-2</p> <p>Ten-Minute Math: Lengths and Perimeters</p> <p>Exploring Solids and Boxes Investigation 4: Sessions 1-3 Investigation 5: Sessions 1-4</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
3.3.3	Estimate and use measuring devices with standard (English and metric) and non-standard units to measure length, surface area, liquid volume (capacity), temperature and weight, communicating the concepts of more, less, and equivalent [3.2]	<p>From Paces to Feet  Investigation 1: Sessions 1-6  Investigation 2: Sessions 1-7  Investigation 3: Sessions 1-3  Investigation 4: Sessions 1-3</p> <p>Combining and Comparing  Investigation 2: Sessions 1-2  Investigation 3: Sessions 1-2</p> <p>Turtle Paths  Investigation 2: Sessions 5-6  Investigation 3: Sessions 1-2</p> <p>Ten-Minute Math: Lengths and Perimeters</p> <p>Exploring Solids and Boxes  Investigation 4: Sessions 1-3  Investigation 5: Sessions 1-4</p>
3.4.3	Identify perimeter and area of regular and irregular figures by counting units and communicate the difference [3.4]	<p>Things That Come in Groups  Investigation 3: Sessions 1-5</p> <p>Flips, Turns, and Area  Investigation 1: Sessions 4-5  Investigation 2: Sessions 1-5</p> <p>Turtle Paths  Investigation 3: Sessions 1-2, 6-7</p> <p>Ten-Minute Math: Lengths and Perimeters</p>
3.3.4	Determine possible combinations of coins and bills to equal given monetary amounts [3.10]	<p>Mathematical Thinking at Grade 3  Investigation 2: Sessions 5-7</p> <p>Landmarks in the Hundreds  Investigation 1: Sessions 6-7  Investigation 2: Session 4</p> <p>Combining and Comparing  Investigation 3, Sessions 1-2</p>
3.3.4	Read, write, and use money notation [3.12]	<p>Mathematical Thinking at Grade 3  Investigation 2: Sessions 5-7</p> <p>Landmarks in the Hundreds  Investigation 1: Sessions 6-7  Investigation 2: Session 4</p> <p>Combining and Comparing  Investigation 3: Sessions 1-2</p>

## SPATIAL RELATIONSHIPS AND GEOMETRY

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
4.3.1	<p><b>Second Trimester:</b> Describe, sketch, construct, compare, and contrast plane geometric figures [4.1]</p>	<p>Flips, Turns, and Area Investigation 1: Sessions 1-5 Investigation 2: Sessions 1-5 Turtle Paths Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-6 Investigation 3: Sessions 1-7</p>
4.3.4	Sketch, model, compare and contrast two- and three-dimensional geometric figures [4.2]	<p>Flips, Turns, and Area Investigation 1: Sessions 1-5 Investigation 2: Sessions 1-5 Turtle Paths Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-6 Investigation 3: Sessions 1-7 Exploring Solids and Boxes Investigation 1: Sessions 1-2 Investigation 2: Sessions 1-5 Investigation 3: Sessions 1-2 Investigation 4: Sessions 1-3 Investigation 5: Sessions 1-4</p>
4.3.2	Demonstrate and describe transformation motion) of geometric figures as a slide, a turn (rotation), or a flip [4.6]	<p>Mathematical Thinking at Grade 3 Investigation 2: Session 1 Flips, Turns, and Area Investigation 1: Sessions 2-3</p>

## DATA ANALYSIS

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
5.3.1	<p><b>Second Trimester:</b></p> <p>Collect, organize, display, and interpret data from surveys and experiments using number lines, pictographs, bar graphs, and frequency tables [5.1]</p>	<p>Mathematical Thinking at Grade 3            Investigation 1: Sessions 2-3            Investigation 3: Sessions 1-4</p> <p>Things That Come in Groups            Investigation 1: Session 1            Investigation 2: Sessions 1, 5-6            Investigation 5: Sessions 1-4</p> <p>From Paces to Feet            Investigation 1: Sessions 1-2, 5-6            Investigation 2: Sessions 2-7            Investigation 3: Sessions 1-3            Investigation 4: Sessions 1-3</p> <p>Landmarks in the Hundreds            Investigation 1: Sessions 2-3, 6-7            Investigation 2: Sessions 1-3            Investigation 3: Session 1</p> <p>Up and Down the Number Line            Investigation 1: Sessions 1-2, 8            Investigation 2: Sessions 1-4</p> <p>Combining and Comparing            Investigation 1: Session 3            Investigation 4: Session 1</p> <p>Ten-Minute Math: Exploring Data</p> <p>Fair Shares            Investigation 2: Sessions 5-6</p>
5.3.1	<p>Read and interpret displays of data; draw conclusions from charts, tables, and graphs to solve problems [5.2]</p>	<p>Mathematical Thinking at Grade 3            Investigation 1: Sessions 2-3            Investigation 3: Sessions 1-4</p> <p>Things That Come in Groups            Investigation 1: Session 1            Investigation 2: Sessions 1, 5-6            Investigation 5: Sessions 1-4</p> <p>From Paces to Feet            Investigation 1: Sessions 1-2, 5-6            Investigation 2: Sessions 2-7            Investigation 3: Sessions 1-3            Investigation 4: Sessions 1-3</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Landmarks in the Hundreds Investigation 1: Sessions 2-3, 6-7 Investigation 2: Sessions 1-3 Investigation 3: Session 1 Up and Down the Number Line Investigation 1: Sessions 1-2, 8 Investigation 2: Sessions 1-4 Combining and Comparing Investigation 1: Session 3 Investigation 4: Session 1 Ten-Minute Math: Exploring Data Fair Shares Investigation 2: Sessions 5-6
5.3.2	<b>Third Trimester:</b> Use and apply concepts of probability such as equal, best, impossible, unlikely, likely, and certain to make predictions about future events [5.3]	Things That Come in Groups Ten-Minute Math: Likely or Unlikely? Up and Down the Number Line Investigation 3: Sessions 1-3 Exploring Solids and Boxes Ten-Minute Math: What Is Likely?

## PROBLEM SOLVING

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.3.1	<p><b>First Trimester:</b>            Select and apply strategies to solve problems [6.1]</p>	<p>Students select, modify, develop, and apply strategies to solve a variety of mathematical and practical problems and to investigate and understand mathematical concepts throughout the course. For example, students investigate why certain tetrominoes can cover given rectangles, while others cannot, and make generalizations based on their explorations.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 3                Investigation 3: Sessions 1-2            Things That Come in Groups                Investigation 5: Session 3            Flips, Turns, and Area                Investigation 1: Session 5            From Paces to Feet                Investigation 2: Session 2            Landmarks in the Hundreds                Investigation 2: Session 4            Up and Down the Number Line                Investigation 2: Session 4            Combining and Comparing                Investigation 1: Sessions 1-3            Turtle Paths                Investigation 3: Sessions 1-2            Fair Shares                Investigation 3: Session 3            Exploring Solids and Boxes                Investigation 2: Sessions 4-5</p>



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.3.2	Apply previous experience and knowledge to new problem-solving situations [6.2]	<p>Students apply previous experience and knowledge to new problem-solving situations throughout the course. For example, students use previously learned addition facts to learn new number combinations.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 3                Investigation 2: Session 2            Things That Come in Groups                Investigation 3: Sessions 1-2            Flips, Turns, and Area                Investigation 2: Session 1            From Paces to Feet                Investigation 1: Session 1            Landmarks in the Hundreds                Investigation 2: Session 4            Up and Down the Number Line                Investigation 1: Sessions 1-2            Combining and Comparing                Investigation 1: Sessions 1-2            Turtle Paths                Investigation 1: Session 2            Fair Shares                Investigation 1: Sessions 1-2            Exploring Solids and Boxes                Investigation 4: Session 1</p>
6.3.1	<p><b>Second Trimester:</b>            Select and apply strategies to solve problems [6.1]</p>	<p>Students select, modify, develop, and apply strategies to solve a variety of mathematical and practical problems and to investigate and understand mathematical concepts throughout the course. For example, students investigate why certain tetrominoes can cover given rectangles, while others cannot, and make generalizations based on their explorations.</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
		<p><b>Sample References:</b>  Mathematical Thinking at Grade 3  Investigation 3: Sessions 1-2  Things That Come in Groups  Investigation 5: Session 3  Flips, Turns, and Area  Investigation 1: Session 5  From Paces to Feet  Investigation 2: Session 2  Landmarks in the Hundreds  Investigation 2: Session 4  Up and Down the Number Line  Investigation 2: Session 4  Combining and Comparing  Investigation 1: Sessions 1-3  Turtle Paths  Investigation 3: Sessions 1-2  Fair Shares  Investigation 3: Session 3  Exploring Solids and Boxes  Investigation 2: Sessions 4-5</p>
6.3.2	Apply previous experience and knowledge to new problem-solving situations [6.2]	<p>Students apply previous experience and knowledge to new problem-solving situations throughout the course. For example, students use previously learned addition facts to learn new number combinations.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 3  Investigation 2: Session 2  Things That Come in Groups  Investigation 3: Sessions 1-2  Flips, Turns, and Area  Investigation 2: Session 1  From Paces to Feet  Investigation 1: Session 1  Landmarks in the Hundreds  Investigation 2: Session 4  Up and Down the Number Line  Investigation 1: Sessions 1-2</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Combining and Comparing Investigation 1: Sessions 1-2 Turtle Paths Investigation 1: Session 2 Fair Shares Investigation 1: Sessions 1-2 Exploring Solids and Boxes Investigation 4: Session 1
6.3.1	<b>Third Trimester:</b> Select and apply strategies to solve problems [6.1]	Students select, modify, develop, and apply strategies to solve a variety of mathematical and practical problems and to investigate and understand mathematical concepts throughout the course. For example, students investigate why certain tetrominoes can cover given rectangles, while others cannot, and make generalizations based on their explorations. <b>Sample References:</b> Mathematical Thinking at Grade 3 Investigation 3: Sessions 1-2 Things That Come in Groups Investigation 5: Session 3 Flips, Turns, and Area Investigation 1: Session 5 From Paces to Feet Investigation 2: Session 2 Landmarks in the Hundreds Investigation 2: Session 4 Up and Down the Number Line Investigation 2: Session 4 Turtle Paths Investigation 3: Sessions 1-2 Fair Shares Investigation 3: Session 3 Exploring Solids and Boxes Investigation 2: Sessions 4-5

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.3.2	Apply previous experience and knowledge to new problem-solving situations [6.2]	<p>Students apply previous experience and knowledge to new problem-solving situations throughout the course. For example, students use previously learned addition facts to learn new number combinations.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 3                Investigation 2: Session 2            Things That Come in Groups                Investigation 3: Sessions 1-2            Flips, Turns, and Area                Investigation 2: Session 1            From Paces to Feet                Investigation 1: Session 1            Landmarks in the Hundreds                Investigation 2: Session 4            Up and Down the Number Line                Investigation 1: Sessions 1-2            Combining and Comparing                Investigation 1: Sessions 1-2            Turtle Paths                Investigation 1: Session 2            Fair Shares                Investigation 1: Sessions 1-2            Exploring Solids and Boxes                Investigation 4: Session 1</p>

## MATHEMATICAL COMMUNICATION

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.3.5	<p><b>First Trimester:</b></p> <p>Identify and translate key words and phrases that imply mathematical operations [7.3]</p>	<p>Students identify and translate key words and phrases that imply mathematical operations throughout the course. For example, students use key words to identify and distinguish between multiplication and division story problems.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 3            Investigation 2: Session 1:                Teacher Note, page 21</p> <p>Things That Come in Groups            Investigation 4: Sessions 1-2            Flips, Turns, and Area            Investigation 1: Session 1</p> <p>From Paces to Feet            Investigation 1: Sessions 5-6</p> <p>Landmarks in the Hundreds            Investigation 1: Sessions 2-3:                Teacher Note, page 15</p> <p>Up and Down the Number Line            Investigation 2: Sessions 2-3</p> <p>Combining and Comparing            Investigation 4: Session 2:                Teacher Note, page 52</p> <p>Turtle Paths            Investigation 2: Session 3</p> <p>Fair Shares            Investigation 2: Session 7</p> <p>Exploring Solids and Boxes            Investigation 2: Sessions 4-5</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.3.16	Express mathematical ideas and use them to define, compare, and solve problems orally and in writing [7.7]	<p>Students express mathematical ideas and use them to define, compare, and solve problems orally and in writing throughout the course. The Dialogue Box is a feature that appears with many investigations and contains the text of discussions between teacher and students in which the teacher encourages the students to express and share mathematical ideas and solution strategies. In one activity, students write mathematical arguments to support the need for a standard unit of measurement.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 3  Investigation 4: Session 3  Things That Come in Groups  Investigation 2: Sessions 5-6  Flips, Turns, and Area  Investigation 2: Sessions 4-5  From Paces to Feet  Investigation 2: Session 2  Landmarks in the Hundreds  Investigation 2: Sessions 1-3  Up and Down the Number Line  Investigation 1: Sessions 1-2  Combining and Comparing  Investigation 1: Sessions 1-2  Turtle Paths  Investigation 2: Sessions 5-6  Fair Shares  Investigation 3: Sessions 1-2  Exploring Solids and Boxes  Investigation 3: Session 1</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.3.16 7.3.17	Use and understand models, pictures, diagrams, and tables of mathematical ideas	<p>Students use a variety of representations to communicate mathematical ideas throughout the course. They use manipulatives, including cubes, tiles, balances, pattern blocks, geoblocks, tetrominoes, and snap cubes to model numbers, operations, patterns, and problem situations. They create graphs, charts, drawings, and tables to organize, record, and communicate mathematical ideas.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 3  Investigation 3: Sessions 3-4  Things That Come in Groups  Investigation 1: Session 2  Flips, Turns, and Area  Investigation 2: Sessions 2-3  From Paces to Feet  Investigation 4: Sessions 1-3  Landmarks in the Hundreds  Investigation 3: Session 1  Up and Down the Number Line  Investigation 1: Sessions 3-4  Combining and Comparing  Investigation 2: Sessions 1-2  Turtle Paths  Investigation 1: Sessions 3-4  Fair Shares  Investigation 1: Sessions 1-4  Exploring Solids and Boxes  Investigation 2: Sessions 1-2</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.3.5	<p><b>Second Trimester:</b></p> <p>Identify and translate key words and phrases that imply mathematical operations [7.3]</p>	<p>Students identify and translate key words and phrases that imply mathematical operations throughout the course. For example, students use key words to identify and distinguish between multiplication and division story problems.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 3  Investigation 2: Session 1:  Teacher Note, page 21</p> <p>Things That Come in Groups  Investigation 4: Sessions 1-2</p> <p>Flips, Turns, and Area  Investigation 1: Session 1</p> <p>From Paces to Feet  Investigation 1: Sessions 5-6</p> <p>Landmarks in the Hundreds  Investigation 1: Sessions 2-3:  Teacher Note, page 15</p> <p>Up and Down the Number Line  Investigation 2: Sessions 2-3</p> <p>Combining and Comparing  Investigation 4: Session 2:  Teacher Note, page 52</p> <p>Turtle Paths  Investigation 2: Session 3</p> <p>Fair Shares  Investigation 2: Session 7</p> <p>Exploring Solids and Boxes  Investigation 2: Sessions 4-5</p>



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.3.16	Express mathematical ideas and use them to define, compare, and solve problems orally and in writing [7.7]	<p>Students express mathematical ideas and use them to define, compare, and solve problems orally and in writing throughout the course. The Dialogue Box is a feature that appears with many investigations and contains the text of discussions between teacher and students in which the teacher encourages the students to express and share mathematical ideas and solution strategies. In one activity, students write mathematical arguments to support the need for a standard unit of measurement.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 3  Investigation 4: Session 3  Things That Come in Groups  Investigation 2: Sessions 5-6  Flips, Turns, and Area  Investigation 2: Sessions 4-5  From Paces to Feet  Investigation 2: Session 2  Landmarks in the Hundreds  Investigation 2: Sessions 1-3  Up and Down the Number Line  Investigation 1: Sessions 1-2  Combining and Comparing  Investigation 1: Sessions 1-2  Turtle Paths  Investigation 2: Sessions 5-6  Fair Shares  Investigation 3: Sessions 1-2  Exploring Solids and Boxes  Investigation 3: Session 1</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.3.16 7.3.17	Use and understand models, pictures, diagrams, and tables of mathematical ideas	<p>Students use a variety of representations to communicate mathematical ideas throughout the course. They use manipulatives, including cubes, tiles, balances, pattern blocks, geoblocks, tetrominoes, and snap cubes to model numbers, operations, patterns, and problem situations. They create graphs, charts, drawings, and tables to organize, record, and communicate mathematical ideas.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 3  Investigation 3: Sessions 3-4  Things That Come in Groups  Investigation 1: Session 2  Flips, Turns, and Area  Investigation 2: Sessions 2-3  From Paces to Feet  Investigation 4: Sessions 1-3  Landmarks in the Hundreds  Investigation 3: Session 1  Up and Down the Number Line  Investigation 1: Sessions 3-4  Combining and Comparing  Investigation 2: Sessions 1-2  Turtle Paths  Investigation 1: Sessions 3-4  Fair Shares  Investigation 1: Sessions 1-4  Exploring Solids and Boxes  Investigation 2: Sessions 1-2</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.3.5	<p><b>Third Trimester:</b></p> <p>Identify and translate key words and phrases that imply mathematical operations [7.3]</p>	<p>Students identify and translate key words and phrases that imply mathematical operations throughout the course. For example, students use key words to identify and distinguish between multiplication and division story problems.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 3  Investigation 2: Session 1:  Teacher Note, page 21</p> <p>Things That Come in Groups  Investigation 4: Sessions 1-2  Flips, Turns, and Area  Investigation 1: Session 1</p> <p>From Paces to Feet  Investigation 1: Sessions 5-6  Landmarks in the Hundreds  Investigation 1: Sessions 2-3:  Teacher Note, page 15</p> <p>Up and Down the Number Line  Investigation 2: Sessions 2-3  Combining and Comparing  Investigation 4: Session 2:  Teacher Note, page 52</p> <p>Turtle Paths  Investigation 2: Session 3</p> <p>Fair Shares  Investigation 2: Session 7</p> <p>Exploring Solids and Boxes  Investigation 2: Sessions 4-5</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.3.16	Express mathematical ideas and use them to define, compare, and solve problems orally and in writing [7.7]	<p>Students express mathematical ideas and use them to define, compare, and solve problems orally and in writing throughout the course. The Dialogue Box is a feature that appears with many investigations and contains the text of discussions between teacher and students in which the teacher encourages the students to express and share mathematical ideas and solution strategies. In one activity, students write mathematical arguments to support the need for a standard unit of measurement.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 3  Investigation 4: Session 3  Things That Come in Groups  Investigation 2: Sessions 5-6  Flips, Turns, and Area  Investigation 2: Sessions 4-5  From Paces to Feet  Investigation 2: Session 2  Landmarks in the Hundreds  Investigation 2: Sessions 1-3  Up and Down the Number Line  Investigation 1: Sessions 1-2  Combining and Comparing  Investigation 1: Sessions 1-2  Turtle Paths  Investigation 2: Sessions 5-6  Fair Shares  Investigation 3: Sessions 1-2  Exploring Solids and Boxes  Investigation 3: Session 1</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.3.16 7.3.17	Use and understand models, pictures, diagrams, and tables of mathematical ideas	<p>Students use a variety of representations to communicate mathematical ideas throughout the course. They use manipulatives, including cubes, tiles, balances, pattern blocks, geoblocks, tetrominoes, and snap cubes to model numbers, operations, patterns, and problem situations. They create graphs, charts, drawings, and tables to organize, record, and communicate mathematical ideas.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 3  Investigation 3: Sessions 3-4  Things That Come in Groups  Investigation 1: Session 2  Flips, Turns, and Area  Investigation 2: Sessions 2-3  From Paces to Feet  Investigation 4: Sessions 1-3  Landmarks in the Hundreds  Investigation 3: Session 1  Up and Down the Number Line  Investigation 1: Sessions 3-4  Combining and Comparing  Investigation 2: Sessions 1-2  Turtle Paths  Investigation 1: Sessions 3-4  Fair Shares  Investigation 1: Sessions 1-4  Exploring Solids and Boxes  Investigation 2: Sessions 1-2</p>

## MATHEMATICAL REASONING

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.3.11	<p><b>First Trimester:</b></p> <p>Determine relevant, irrelevant, and/or sufficient information to solve mathematical problems [8.5]</p>	<p>Students determine relevant, irrelevant, and/or sufficient information to solve mathematical problems throughout the course. Informational analysis is a fundamental component of the problem-solving process. For example, in one activity students collect, sort, classify, organize, and display information as they play a game called Guess My Rule.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 3            Investigation 3: Sessions 1-2            Things That Come in Groups            Investigation 5: Session 3            Flips, Turns, and Area            Investigation 1: Session 5            From Paces to Feet            Investigation 2: Session 2            Landmarks in the Hundreds            Investigation 2: Session 4            Up and Down the Number Line            Investigation 2: Session 4            Combining and Comparing            Investigation 1: Sessions 1-3            Turtle Paths            Investigation 3: Sessions 1-2            Fair Shares            Investigation 3: Session 3            Exploring Solids and Boxes            Investigation 2: Sessions 4-5</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.3.11	<p><b>Second Trimester:</b></p> <p>Determine relevant, irrelevant, and/or sufficient information to solve mathematical problems [8.5]</p>	<p>Students determine relevant, irrelevant, and/or sufficient information to solve mathematical problems throughout the course. Informational analysis is a fundamental component of the problem-solving process. For example, in one activity students collect, sort, classify, organize, and display information as they play a game called Guess My Rule.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 3  Investigation 3: Sessions 1-2  Things That Come in Groups  Investigation 5: Session 3  Flips, Turns, and Area  Investigation 1: Session 5  From Paces to Feet  Investigation 2: Session 2  Landmarks in the Hundreds  Investigation 2: Session 4  Up and Down the Number Line  Investigation 2: Session 4  Combining and Comparing  Investigation 1: Sessions 1-3  Turtle Paths  Investigation 3: Sessions 1-2  Fair Shares  Investigation 3: Session 3  Exploring Solids and Boxes  Investigation 2: Sessions 4-5</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.3.11	<p><b>Third Trimester:</b></p> <p>Determine relevant, irrelevant, and/or sufficient information to solve mathematical problems [8.5]</p>	<p>Students determine relevant, irrelevant, and/or sufficient information to solve mathematical problems throughout the course. Informational analysis is a fundamental component of the problem-solving process. For example, in one activity students collect, sort, classify, organize, and display information as they play a game called Guess My Rule.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 3  Investigation 3: Sessions 1-2  Things That Come in Groups  Investigation 5: Session 3  Flips, Turns, and Area  Investigation 1: Session 5  From Paces to Feet  Investigation 2: Session 2  Landmarks in the Hundreds  Investigation 2: Session 4  Up and Down the Number Line  Investigation 2: Session 4  Combining and Comparing  Investigation 1: Sessions 1-3  Turtle Paths  Investigation 3: Sessions 1-2  Fair Shares  Investigation 3: Session 3  Exploring Solids and Boxes  Investigation 2: Sessions 4-5</p>



**Investigations in Number, Data, and Space  
to the  
Clark County School District Guide for Benchmarks**

**Grade Four**

**NUMBERS, NUMBER SENSE, AND COMPUTATION**

<b>Nevada Standard</b>	<b>Clark County School District Guide for Benchmarks</b>	<b>Investigations in Number, Data, and Space</b>
1.4.7	<p><b>First Trimester:</b></p> <p>Round numbers to the nearest tens, hundreds, or thousands and use estimation to determine the reasonableness of answers [1.3]</p>	<p>The following references are to a variety of estimation techniques, including rounding.</p> <p><b>References:</b>            Mathematical Thinking at Grade 4                Investigation 1: Sessions 2-4                Investigation 2: Sessions 3-4:                Choice 2, page 42                Ten-Minute Math: Estimation and Number Sense            Landmarks in the Thousands                Investigation 3: Sessions 3-5            The Shape of the Data                Ten-Minute Math: Estimation and Number Sense            Packages and Groups                Investigation 2: Sessions 2-3            Money, Miles, and Large Numbers                Investigation 1: Sessions 1-2, 7-8                Investigation 2: Sessions 1-2                Investigation 3: Session 1</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.4.5	Model and explain division including as repeated subtraction [1.5]	<p>Arrays and Shares            Investigation 1: Session 3            Investigation 2: Sessions 2-3, 7-8            Investigation 3: Sessions 2-4            Ten-Minute Math: Counting Around the Class            Ten-Minute Math: Multiple BINGO            Landmarks in the Thousands            Investigation 2: Session 1            Ten-Minute Math: Counting Around the Class            Packages and Groups            Investigation 3: Sessions 1-10</p>
	Add and subtract multi-digit numbers with and without regrouping [1.18]	<p>Mathematical Thinking at Grade 4            Investigation 3: Sessions 3-5            Ten-Minute Math: Estimation and Number Sense            Landmarks in the Thousands            Investigation 2: Sessions 2-4            Investigation 3: Sessions 3-5            Money, Miles, and Large Numbers            Investigation 1: Sessions 3, 6            Investigation 3: Sessions 1-4</p>
	Multiply by multiples of ten or a hundred [1.19]	<p>Mathematical Thinking at Grade 4            Investigation 1: Sessions 2-3            Arrays and Shares            Investigation 2: Session 1            Investigation 3:                Session 1                Sessions 2-4: Teacher Note, page 54                Session 5            Packages and Groups            Investigation 2: Session 1</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	<p><b>Second Trimester:</b></p> <p>Describe and use the process and properties of addition, subtraction, multiplication, and division, including correct notations and related words [1.7]</p>	<p>Arrays and Shares  Investigation 1: Sessions 1-3  Investigation 2: Sessions 1-8  Investigation 3: Sessions 1-5  Ten-Minute Math: Counting Around the Class  Ten-Minute Math: Multiple BINGO</p> <p>Landmarks in the Thousands  Investigation 1: Sessions 1-2  Investigation 2: Sessions 1, 5  Investigation 3: Session 2</p> <p>Different Shapes, Equal Pieces  Investigation 1: Session 5  Investigation 2: Session 3</p> <p>Money, Miles, and Large Numbers  Investigation 1: Sessions 1-2, 4-8  Investigation 2: Sessions 1-2, 4</p> <p>Packages and Groups  Investigation 1: Sessions 1-5  Investigation 2: Sessions 1-3  Investigation 3: Sessions 1-10  Ten-Minute Math: Guess My Number</p>
1.4.1	<p>Immediately recall and use basic facts of multiplication and division through the 12's [1.16]</p>	<p>Mathematical Thinking at Grade 4  Investigation 1: Sessions 2-3</p> <p>Arrays and Shares  Investigation 1: Sessions 1-3  Investigation 2: Sessions 1-8  Investigation 3: Sessions 1-5  Ten-Minute Math: Counting Around the Class  Ten-Minute Math: Multiple BINGO</p> <p>Landmarks in the Thousands  Investigation 2: Session 1  Ten-Minute Math: Counting Around the Class</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Packages and Groups Investigation 1: Sessions 1-3 Investigation 2: Sessions 1-3 Investigation 3: Sessions 1-10
1.4.7	Use a variety of appropriate strategies to estimate, compute, and solve mathematical and real-world problems [1.31]	Mathematical Thinking at Grade 4 Investigation 1: Sessions 2-4 Investigation 2: Sessions 3-4: Choice 2, page 42 Ten-Minute Math: Estimation and Number Sense Arrays and Shares Investigation 1: Sessions 1-3 Investigation 2: Sessions 1-8 Investigation 3: Sessions 1-5 Ten-Minute Math: Counting Around the Class Ten-Minute Math: Multiple BINGO Landmarks in the Thousands Investigation 1: Sessions 1-2 Investigation 2: Sessions 1, 5 Investigation 3: Sessions 2-5 The Shape of the Data Ten-Minute Math: Estimation and Number Sense Different Shapes, Equal Pieces Investigation 1: Session 5 Investigation 2: Session 3 Money, Miles, and Large Numbers Investigation 1: Sessions 1-2, 4-8 Investigation 2: Sessions 1-2, 4 Packages and Groups Investigation 1: Sessions 1-5 Investigation 2: Sessions 1-3 Investigation 3: Sessions 1-10 Ten-Minute Math: Guess My Number

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.4.3	Generate and solve two-step addition, subtraction, and one-step multiplication, and division problems based on practical situations using pencil and paper, mental computation, and estimation [1.29]	<p>Arrays and Shares  Investigation 2: Sessions 1, 7-8  Investigation 3: Sessions 2-4  Choice 6, page 50</p> <p>Landmarks in the Thousands  Investigation 1: Session 2</p> <p>Money, Miles, and Large Numbers  Investigation 1: Sessions 1-8  Investigation 2: Sessions 1-4  Investigation 3: Sessions 2-4</p> <p>Packages and Groups  Investigation 3: Sessions 7-8, 10</p>
1.4.9	Identify and compare fractions with like denominators using numbers and drawings [1.14]	<p>Different Shapes, Equal Pieces  Investigation 1: Sessions 1-5  Investigation 2: Sessions 1-4  Investigation 3: Sessions 1-5</p> <p>Money, Miles, and Large Numbers  Investigation 2: Sessions 1-3</p> <p>Sunken Ships and Grid Patterns  Investigation 2: Session 5</p> <p>Three out of Four Like Spaghetti  Investigation 1: Sessions 1-4</p>
1.4.6	<p><b>Third Trimester:</b></p> <p>Read, write, order, and compare numbers from 0-999, 999 [1.1]</p>	<p>Students explore hundreds and thousands, including landmark numbers; they devise and practice grouping and ordering strategies; and they compare, combine, and perform operations on whole numbers through the thousands.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 4  Investigation 1: Session 1</p> <p>Arrays and Shares  Investigation 1: Sessions 1-3</p> <p>Landmarks in the Thousands  Investigation 4: Sessions 1-3</p> <p>Different Shapes, Equal Pieces  Investigation 1: Sessions 2-4</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	The Shape of the Data Investigation 2: 5-7 Money, Miles, and Large Numbers Investigation 1: Sessions 1-2 Changes Over Time Investigation 1: Sessions 5-6 Packages and Groups Investigation 2: Sessions 1-3 Sunken Ships and Grid Patterns Investigation 1: Sessions 2-4 Three Out of Four Like Spaghetti Practice Pages 69-81
1.4.8	Identify and use place value positions up to 100,000 [1.4]	Mathematical Thinking at Grade 4 Investigation 1: Sessions 2-4 Landmarks in the Thousands Investigation 1: Sessions 1-3 Investigation 2: Sessions 1-5 Investigation 3: Sessions 1-5 Investigation 4: Sessions 1-3 Money, Miles, and Large Numbers Investigation 1: Sessions 1-8 Investigation 2: Sessions 1-2 Investigation 3: Sessions 1-4
1.4.5	Multiply multi-digit numbers by one-digit numbers with regrouping [1.20]	Arrays and Shares Investigation 3: Sessions 1-5 Packages and Groups Investigation 1: Sessions 4-5 Investigation 2: Sessions 1-3 Investigation 3: Sessions 4-6
1.4.5	Divide a multi-digit number by a one-digit number with or without a remainder	Landmarks in the Thousands Investigation 2: Session 1 Packages and Groups Investigation 3: Sessions 1-2
1.4.4	Multiply and divide money amounts by a one digit whole number producing a solution with no remainder [1.28]	Grade 4 students add and subtract money values. <b>References:</b> Money, Miles, and Large Numbers Investigation 1: Sessions 1-8

## PATTERNS, FUNCTIONS, AND ALGEBRA

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
2.4.1	<p><b>First Trimester:</b></p> <p>Identify, describe and represent numeric and geometric patterns and relationships [2.3]</p>	<p>Mathematical Thinking at Grade 4            Investigation 3: Sessions 1-5            Investigation 4: Sessions 1-6            Arrays and Shares            Investigation 1: Sessions 1-3            Investigation 2: Sessions 1-3            Landmarks in the Thousands            Investigation 1: Sessions 1, 3            Investigation 2: Session 1            Investigation 3: Sessions 1-2            Investigation 4: Sessions 1-3            Packages and Groups            Investigation 1:                Sessions 1-3            Investigation 3: Sessions 4-6            Sunken Ships and Grid Patterns            Investigation 2: Sessions 8-9</p>
2.4.3	<p><b>Second Trimester:</b></p> <p>Find solutions to given equalities and variable expressions (open sentences) from a given replacement set (e.g., find the solution to <math>3 \times 7 = \underline{\quad}</math>, given the replacement set {19, 20, 21}) [2.5]</p>	<p>Arrays and Shares            Investigation 2: Sessions 2-3:                Teacher Note, page 23            Landmarks in the Thousands            Investigation 2: Sessions 2-4:                Dialogue Box, page 32            Changes Over Time            Investigation 1: Sessions 5-6            Packages and Groups            Investigation 1: Sessions 4-5,                page 15            Investigation 3: Sessions 7-8,                page 53</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
2.5.4	Use variables	Arrays and Shares Investigation 2: Sessions 2-3: Teacher Note, page 23 Landmarks in the Thousands Investigation 2: Sessions 2-4: Dialogue Box, page 32 Changes Over Time Investigation 1: Sessions 5-6 Packages and Groups Investigation 1: Sessions 4-5, page 15 Investigation 3: Sessions 7-8, page 53

## MEASUREMENT

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
3.4.3 3.4.5	<b>First Trimester:</b> Describe and determine the perimeter and area of polygons [3.5]	Arrays and Shares Investigation 2: Sessions 1-6 Landmarks in the Thousands Investigation 1: Session 2 Different Shapes, Equal Pieces Investigation 1: Sessions 1-5 Investigation 2: Sessions 1-4 Sunken Ships and Grid Patterns Ten-Minute Math: Lengths and Perimeters
3.4.3 3.4.5	Describe and determine the perimeter and area of rectangles (including squares) [3.6]	Arrays and Shares Investigation 2: Sessions 1-6 Landmarks in the Thousands Investigation 1: Session 2 Different Shapes, Equal Pieces Investigation 1: Sessions 1-5 Investigation 2: Sessions 1-4 Sunken Ships and Grid Patterns Ten-Minute Math: Lengths and Perimeters



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
3.4.3 3.4.5	Communicate the difference between perimeter and area [3.7]	<p>Arrays and Shares Investigation 2: Sessions 1-6</p> <p>Landmarks in the Thousands Investigation 1: Session 2</p> <p>Different Shapes, Equal Pieces Investigation 1: Sessions 1-5 Investigation 2: Sessions 1-4</p> <p>Sunken Ships and Grid Patterns Ten-Minute Math: Lengths and Perimeters</p>
3.3.3	<p><b>Second Trimester:</b></p> <p>Estimate measurements [length (including perimeter) weight/mass, volume (capacity), time, temperature, and area using standard measuring devices (English and metric)] with appropriate precision [3.1]</p>	<p>The Shape of the Data Investigation 1: Sessions 1-4</p> <p>Money, Miles, and Large Numbers Investigation 2: Sessions 1-3 Investigation 3: Sessions 2-4</p> <p>Sunken Ships and Grid Patterns Investigation 2: Session 5</p>
3.4.2	Measure and compare length in inches, feet, yards, and miles to the nearest fractional part ( $\frac{1}{4}$ , $\frac{1}{2}$ ); convert within this system of measurement [3.2]	<p>The Shape of the Data Investigation 2: Sessions 1-4</p> <p>Money, Miles, and Large Numbers Investigation 2: Sessions 1-4 Investigation 3: Sessions 2-4</p> <p>Sunken Ships and Grid Patterns Investigation 1: Sessions 1-6</p>
3.4.2	Measure and compare lengths in metric units (millimeter, centimeter, meter, kilometer); convert within metric system of measurement [3.3]	<p>The Shape of the Data Investigation 2: Session 1 Teacher Note, page 26</p> <p>Changes Over Time Unit Preparation: Session 3</p>
3.4.4	<p><b>Third Trimester:</b></p> <p>Determine totals for monetary amounts in problem solving situations [3.4]</p>	<p>Mathematical Thinking at Grade 4 Investigation 2: Sessions 1-4</p> <p>Money, Miles, and Large Numbers Investigation 1: Sessions 1-8</p>

## SPATIAL RELATIONSHIPS AND GEOMETRY

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
4.4.4	<p><b>Third Trimester:</b></p> <p>Identify, describe, and classify two- and three dimensional figures by properties including the number of vertices (corners), edges, and shapes of faces using models [4.2]</p>	<p>Seeing Solids and Silhouettes            Investigation 1: Sessions 1-2            Investigation 2: Sessions 1-5            Investigation 3: Sessions 1-3            Investigation 4: Sessions 1-4            Ten-Minute Math: Quick Images</p> <p>Different Shapes, Equal Pieces            Investigation 1: Sessions 1-5            Investigation 2: Sessions 1-4            Investigation 3: Sessions 1-2</p> <p>Sunken Ships and Grid Patterns            Investigation 1: Sessions 1-6            Investigation 2: Sessions 1-9            Ten-Minute Math: Lengths and Perimeters</p> <p>Changes Over Time            Ten-Minute Math: Quick Images</p>
4.4.6	<p>Identify, describe, and draw basic plane figures (points, lines, line segments, rays, and angles) [4.3]</p>	<p>Mathematical Thinking at Grade 4            Investigation 4: Sessions 2-6</p> <p>Seeing Solids and Silhouettes            Investigation 2: Sessions 1-2            Ten-Minute Math: Quick Images</p> <p>Different Shapes, Equal Pieces            Investigation 1: Sessions 1-5            Investigation 2: Sessions 1-4</p> <p>Changes Over Time            Ten-Minute Math: Quick Images</p> <p>Sunken Ships and Grid Patterns            Investigation 2: Sessions 1-9</p>

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4.4.6	Identify, describe, compare, and draw intersecting and parallel lines [4.4]	Grade 4 students gain experience with parallel lines and perpendicular lines as they use the computer to construct and manipulate points, segments, and rectangles on coordinate grids. <b>References:</b> Sunken Ships and Grid Patterns Investigation 1: Sessions 1-6 Investigation 2: Sessions 1-9 Ten-Minute Math: Lengths and Perimeters
4.4.1	Identify, draw, and classify angles (acute, right, obtuse) according to their measurements [4.5]	Sunken Ships and Grid Patterns Investigation 2: Sessions 1, 5 Ten-Minute Math: Lengths and Perimeters Appendix: <i>Geo-Logo</i> Tutorial
4.4.2	Use motion geometry (including flips, turns, and slides) to examine the concepts of symmetry, similarity, and congruence [4.7]	Mathematical Thinking at Grade 4 Investigation 4: Sessions 1-2, 5-6 Different Shapes, Equal Pieces Investigation 1: Session 1 Money, Miles, and Large Numbers Investigation 2: Session 4 Investigation 3: Sessions 2-4 Sunken Ships and Grid Patterns Investigation 2: Sessions 1-9
4.5.4	Describe geometric patterns, and relationships	Mathematical Thinking at Grade 4 Investigation 4: Sessions 1-6 Arrays and Shares Investigation 2: Sessions 1-3 Sunken Ships and Grid Patterns Investigation 2: Sessions 2-3, 6-9

## DATA ANALYSIS

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
5.4.1	<p><b>Second Trimester:</b></p> <p>Collect, organize, display, describe, and interpret simple data using number lines, pictographs, bar graphs, and frequency tables [5.1]</p>	<p>Mathematical Thinking at Grade 4            Ten-Minute Math: Exploring Data            The Shape of the Data            Investigation 1: Sessions 1-3            Investigation 2: Sessions 1-7            Investigation 3: Sessions 1-5            Changes Over Time            Unit Preparation: Sessions 1-3            Investigation 1: Sessions 1-6            Investigation 2: Sessions 1-2            Investigation 3: Sessions 1-8            Packages and Groups            Ten-Minute Math: Exploring Data            Sunken Ships and Grid Patterns            Investigation 1: Sessions 5-6            Investigation 2: Sessions 1-9            Ten-Minute Math: Lengths and Perimeters            Three out of Four Like Spaghetti            Investigation 1: Sessions 1-4            Investigation 2: Sessions 1-7</p>
5.4.2	<p><b>Third Trimester:</b></p> <p>Conduct simple probability experiments using concrete materials and represent the results using fractions [5.3]</p>	<p>Landmarks in the Thousands            Ten-Minute Math: What Is Likely?            Money, Miles, and Large Numbers            Ten-Minute Math: Likely or Unlikely?            Three Out of Four Like Spaghetti            Ten-Minute Math: What Is Likely?</p>
5.3.2	<p>Apply probability concepts and counting rules [5.4]</p>	<p>Landmarks in the Thousands            Ten-Minute Math: What Is Likely?            Money, Miles, and Large Numbers            Ten-Minute Math: Likely or Unlikely?            Three Out of Four Like Spaghetti            Ten-Minute Math: What Is Likely?</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
5.5.4	Understand and apply measures of central tendency and variability [5.5.7]	The Shape of the Data Investigation 2: Sessions 4-7

## PROBLEM SOLVING

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.4.1	<p><b>First Trimester:</b></p> <p>Select and apply strategies to solve a variety of practical math problems [6.1]</p>	<p>Students select, modify, develop, and apply strategies to solve a variety of mathematical and practical problems throughout the course. For example, through exploration and investigation, students learn to visualize what objects look like from different perspectives.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 4  Investigation 3: Sessions 4-5  Arrays and Shares  Investigation 1: Session 3  Seeing Solids and Silhouettes  Investigation 2: Session 5  Landmarks in the Thousands  Investigation 3: Sessions 3-5  The Shape of the Data  Investigation 1: Sessions 1-3  Money, Miles, and Large Numbers  Investigation 3: Session 1  Packages and Groups  Investigation 2: Session 1  Sunken Ships and Grid Patterns  Ten-Minute Math: Lengths and Perimeters  Three out of Four Like Spaghetti  Investigation 2: Sessions 5-7</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.4.2	Apply previous experience to new problems [6.2]	<p>Students apply previous experience and knowledge to new problem-solving situations throughout the course. For example, students extend their knowledge of the base-ten number system; they perform operations on larger and different sets of numbers, including fractions and decimals; and they expand their experience with concepts of geometry and statistics.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 4  Investigation 1: Sessions 2-3  Arrays and Shares  Investigation 2: Session 1  Seeing Solids and Silhouettes  Investigation 4: Sessions 1-4  Landmarks in the Thousands  Investigation 1: Session 2  Different Shapes, Equal Pieces  Investigation 1: Session 1  The Shape of the Data  Investigation 1: Session 1  Money, Miles, and Large Numbers  Investigation 1: Sessions 1-2  Changes Over Time  Unit Preparation: Sessions 1-3  Packages and Groups  Investigation 3: Sessions 1-2  Sunken Ships and Grid Patterns  Investigation 1: Session 1  Three out of Four Like Spaghetti  Investigation 2: Session 4</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.4.5	Interpret, and evaluate results [6.3]	<p>Students verify, interpret, and evaluate results with respect to the original problem situation throughout the course. For example, students interpret and evaluate the results of adding and subtracting large numbers and estimating quantities of objects.</p> <p><b>Sample References:</b></p> <ul style="list-style-type: none"> <li>Mathematical Thinking at Grade 4 <ul style="list-style-type: none"> <li>Investigation 3: Sessions 4-5</li> </ul> </li> <li>Arrays and Shares <ul style="list-style-type: none"> <li>Investigation 2: Sessions 7-8</li> </ul> </li> <li>Seeing Solids and Silhouettes <ul style="list-style-type: none"> <li>Investigation 3: Session 1</li> </ul> </li> <li>Landmarks in the Thousands <ul style="list-style-type: none"> <li>Investigation 3: Sessions 3-5</li> </ul> </li> <li>Different Shapes, Equal Pieces <ul style="list-style-type: none"> <li>Investigation 1: Sessions 2-4</li> </ul> </li> <li>The Shape of the Data <ul style="list-style-type: none"> <li>Investigation 2: Sessions 2-3</li> </ul> </li> <li>Money, Miles, and Large Numbers <ul style="list-style-type: none"> <li>Investigation 1: Session 6</li> </ul> </li> <li>Changes Over Time <ul style="list-style-type: none"> <li>Investigation 3: Session 3</li> </ul> </li> <li>Packages and Groups <ul style="list-style-type: none"> <li>Investigation 3: Session 10</li> </ul> </li> <li>Sunken Ships and Grid Patterns <ul style="list-style-type: none"> <li>Investigation 2: Session 5</li> </ul> </li> <li>Three out of Four Like Spaghetti <ul style="list-style-type: none"> <li>Investigation 1: Session 4</li> </ul> </li> </ul>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.4.10	Select efficient problem-solving strategies, ensure reasonableness [6.6]	<p>Students select, develop, and evaluate efficient strategies for solving problems to ensure the reasonableness of their results; for example, students work cooperatively with a partner to replicate patterns and use mirror symmetry to create new patterns.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 4  Investigation 4: Session 1  Arrays and Shares  Investigation 2: Session 1  Seeing Solids and Silhouettes  Investigation 4: Sessions 1-4  Landmarks in the Thousands  Investigation 4: Sessions 1-3  Different Shapes, Equal Pieces  Investigation 3: Sessions 4-5  The Shape of the Data  Investigation 1: Session 1  Money, Miles, and Large Numbers  Investigation 2: Session 4  Changes Over Time  Investigation 3: Session 5  Packages and Groups  Investigation 1: Sessions 1-2  Sunken Ships and Grid Patterns  Investigation 1: Session 1  Three out of Four Like Spaghetti  Investigation 2: Sessions 5-7</p>



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.4.1	<p><b>Second Trimester:</b></p> <p>Select and apply strategies to solve a variety of practical math problems [6.1]</p>	<p>Students select, modify, develop, and apply strategies to solve a variety of mathematical and practical problems throughout the course. For example, through exploration and investigation, students learn to visualize what objects look like from different perspectives.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 4  Investigation 3: Sessions 4-5  Arrays and Shares  Investigation 1: Session 3  Seeing Solids and Silhouettes  Investigation 2: Session 5  Landmarks in the Thousands  Investigation 3: Sessions 3-5  Different Shapes, Equal Pieces  Investigation 3: Session 3  The Shape of the Data  Investigation 1: Sessions 1-3  Money, Miles, and Large Numbers  Investigation 3: Session 1  Changes Over Time  Investigation 1: Sessions 5-6  Packages and Groups  Investigation 2: Session 1  Sunken Ships and Grid Patterns  Ten-Minute Math: Lengths and Perimeters  Three out of Four Like Spaghetti  Investigation 2: Sessions 5-7</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.4.2	Apply previous experience to new problems [6.2]	<p>Students apply previous experience and knowledge to new problem-solving situations throughout the course. For example, students extend their knowledge of the base-ten number system; they perform operations on larger and different sets of numbers, including fractions and decimals; and they expand their experience with concepts of geometry and statistics.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 4  Investigation 1: Sessions 2-3  Arrays and Shares  Investigation 2: Session 1  Seeing Solids and Silhouettes  Investigation 4: Sessions 1-4  Landmarks in the Thousands  Investigation 1: Session 2  Different Shapes, Equal Pieces  Investigation 1: Session 1  The Shape of the Data  Investigation 1: Session 1  Money, Miles, and Large Numbers  Investigation 1: Sessions 1-2  Changes Over Time  Unit Preparation: Sessions 1-3  Packages and Groups  Investigation 3: Sessions 1-2  Sunken Ships and Grid Patterns  Investigation 1: Session 1  Three out of Four Like Spaghetti  Investigation 2: Session 4</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.4.5	Interpret, and evaluate results [6.3]	<p>Students verify, interpret, and evaluate results with respect to the original problem situation throughout the course. For example, students interpret and evaluate the results of adding and subtracting large numbers and estimating quantities of objects.</p> <p><b>Sample References:</b></p> <ul style="list-style-type: none"> <li>Mathematical Thinking at Grade 4 <ul style="list-style-type: none"> <li>Investigation 3: Sessions 4-5</li> </ul> </li> <li>Arrays and Shares <ul style="list-style-type: none"> <li>Investigation 2: Sessions 7-8</li> </ul> </li> <li>Seeing Solids and Silhouettes <ul style="list-style-type: none"> <li>Investigation 3: Session 1</li> </ul> </li> <li>Landmarks in the Thousands <ul style="list-style-type: none"> <li>Investigation 3: Sessions 3-5</li> </ul> </li> <li>Different Shapes, Equal Pieces <ul style="list-style-type: none"> <li>Investigation 1: Sessions 2-4</li> </ul> </li> <li>The Shape of the Data <ul style="list-style-type: none"> <li>Investigation 2: Sessions 2-3</li> </ul> </li> <li>Money, Miles, and Large Numbers <ul style="list-style-type: none"> <li>Investigation 1: Session 6</li> </ul> </li> <li>Changes Over Time <ul style="list-style-type: none"> <li>Investigation 3: Session 3</li> </ul> </li> <li>Packages and Groups <ul style="list-style-type: none"> <li>Investigation 3: Session 10</li> </ul> </li> <li>Sunken Ships and Grid Patterns <ul style="list-style-type: none"> <li>Investigation 2: Session 5</li> </ul> </li> <li>Three out of Four Like Spaghetti <ul style="list-style-type: none"> <li>Investigation 1: Session 4</li> </ul> </li> </ul>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.4.10	Select efficient problem-solving strategies, ensure reasonableness [6.6]	<p>Students select, develop, and evaluate efficient strategies for solving problems to ensure the reasonableness of their results; for example, students work cooperatively with a partner to replicate patterns and use mirror symmetry to create new patterns.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 4  Investigation 4: Session 1  Arrays and Shares  Investigation 2: Session 1  Seeing Solids and Silhouettes  Investigation 4: Sessions 1-4  Landmarks in the Thousands  Investigation 4: Sessions 1-3  Different Shapes, Equal Pieces  Investigation 3: Sessions 4-5  The Shape of the Data  Investigation 1: Session 1  Money, Miles, and Large Numbers  Investigation 2: Session 4  Changes Over Time  Investigation 3: Session 5  Packages and Groups  Investigation 1: Sessions 1-2  Sunken Ships and Grid Patterns  Investigation 1: Session 1  Three out of Four Like Spaghetti  Investigation 2: Sessions 5-7</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.4.1	<p><b>Third Trimester:</b></p> <p>Select and apply strategies to solve a variety of practical math problems [6.1]</p>	<p>Students select, modify, develop, and apply strategies to solve a variety of mathematical and practical problems throughout the course. For example, through exploration and investigation, students learn to visualize what objects look like from different perspectives.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 4  Investigation 3: Sessions 4-5  Arrays and Shares  Investigation 1: Session 3  Seeing Solids and Silhouettes  Investigation 2: Session 5  Landmarks in the Thousands  Investigation 3: Sessions 3-5  Different Shapes, Equal Pieces  Investigation 3: Session 3  The Shape of the Data  Investigation 1: Sessions 1-3  Money, Miles, and Large Numbers  Investigation 3: Session 1  Changes Over Time  Investigation 1: Sessions 5-6  Packages and Groups  Investigation 2: Session 1  Sunken Ships and Grid Patterns  Ten-Minute Math: Lengths and Perimeters  Three out of Four Like Spaghetti  Investigation 2: Sessions 5-7</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.4.2	Apply previous experience to new problems [6.2]	<p>Students apply previous experience and knowledge to new problem-solving situations throughout the course. For example, students extend their knowledge of the base-ten number system; they perform operations on larger and different sets of numbers, including fractions and decimals; and they expand their experience with concepts of geometry and statistics.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 4  Investigation 1: Sessions 2-3  Arrays and Shares  Investigation 2: Session 1  Seeing Solids and Silhouettes  Investigation 4: Sessions 1-4  Landmarks in the Thousands  Investigation 1: Session 2  Different Shapes, Equal Pieces  Investigation 1: Session 1  The Shape of the Data  Investigation 1: Session 1  Money, Miles, and Large Numbers  Investigation 1: Sessions 1-2  Changes Over Time  Unit Preparation: Sessions 1-3  Packages and Groups  Investigation 3: Sessions 1-2  Sunken Ships and Grid Patterns  Investigation 1: Session 1  Three out of Four Like Spaghetti  Investigation 2: Session 4</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.4.5	Interpret, and evaluate results [6.3]	<p>Students verify, interpret, and evaluate results with respect to the original problem situation throughout the course. For example, students interpret and evaluate the results of adding and subtracting large numbers and estimating quantities of objects.</p> <p><b>Sample References:</b></p> <ul style="list-style-type: none"> <li>Mathematical Thinking at Grade 4 <ul style="list-style-type: none"> <li>Investigation 3: Sessions 4-5</li> </ul> </li> <li>Arrays and Shares <ul style="list-style-type: none"> <li>Investigation 2: Sessions 7-8</li> </ul> </li> <li>Seeing Solids and Silhouettes <ul style="list-style-type: none"> <li>Investigation 3: Session 1</li> </ul> </li> <li>Landmarks in the Thousands <ul style="list-style-type: none"> <li>Investigation 3: Sessions 3-5</li> </ul> </li> <li>Different Shapes, Equal Pieces <ul style="list-style-type: none"> <li>Investigation 1: Sessions 2-4</li> </ul> </li> <li>The Shape of the Data <ul style="list-style-type: none"> <li>Investigation 2: Sessions 2-3</li> </ul> </li> <li>Money, Miles, and Large Numbers <ul style="list-style-type: none"> <li>Investigation 1: Session 6</li> </ul> </li> <li>Changes Over Time <ul style="list-style-type: none"> <li>Investigation 3: Session 3</li> </ul> </li> <li>Packages and Groups <ul style="list-style-type: none"> <li>Investigation 3: Session 10</li> </ul> </li> <li>Sunken Ships and Grid Patterns <ul style="list-style-type: none"> <li>Investigation 2: Session 5</li> </ul> </li> <li>Three out of Four Like Spaghetti <ul style="list-style-type: none"> <li>Investigation 1: Session 4</li> </ul> </li> </ul>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.4.10	Select efficient problem-solving strategies, ensure reasonableness [6.6]	<p>Students select, develop, and evaluate efficient strategies for solving problems to ensure the reasonableness of their results; for example, students work cooperatively with a partner to replicate patterns and use mirror symmetry to create new patterns.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 4  Investigation 4: Session 1  Arrays and Shares  Investigation 2: Session 1  Seeing Solids and Silhouettes  Investigation 4: Sessions 1-4  Landmarks in the Thousands  Investigation 4: Sessions 1-3  Different Shapes, Equal Pieces  Investigation 3: Sessions 4-5  The Shape of the Data  Investigation 1: Session 1  Money, Miles, and Large Numbers  Investigation 2: Session 4  Changes Over Time  Investigation 3: Session 5  Packages and Groups  Investigation 1: Sessions 1-2  Sunken Ships and Grid Patterns  Investigation 1: Session 1  Three out of Four Like Spaghetti  Investigation 2: Sessions 5-7</p>



## MATHEMATICAL COMMUNICATION

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.4.5	<p><b>First Trimester:</b></p> <p>Identify and translate key words and phrases that imply mathematical operations [7.3]</p>	<p>Students identify and translate key words and phrases that imply mathematical operations throughout the course. For example, students recognize key words to identify division situations.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 4</p> <p>Investigation 1: Session 4</p> <p>Arrays and Shares</p> <p>Investigation 2: Sessions 7-8</p> <p>Seeing Solids and Silhouettes</p> <p>Investigation 4: Sessions 1-4</p> <p>Landmarks in the Thousands</p> <p>Investigation 2: Sessions 2-4:</p> <p>Dialogue Box, page 33</p> <p>Different Shapes, Equal Pieces</p> <p>Investigation 3: Session 3</p> <p>The Shape of the Data</p> <p>Investigation 2: Session 5</p> <p>Money, Miles, and Large Numbers</p> <p>Investigation 3: Session 1</p> <p>Changes Over Time</p> <p>Investigation 3: Sessions 1-2</p> <p>Packages and Groups</p> <p>Investigation 3: Session 10</p> <p>Sunken Ships and Grid Patterns</p> <p>Investigation 1: Sessions 5-6:</p> <p>Dialogue Box, page 41</p> <p>Three out of Four Like Spaghetti</p> <p>Investigation 1: Session 4</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.4.8	Use physical materials, models, pictures, or writing to represent mathematical ideas [7.4]	<p>Students use physical materials and diagrams to represent and then communicate mathematical ideas through oral and written formats throughout the course. For example, students use arrays as models for multiplication; they relate cube configurations to two-dimensional drawings, mental images, and verbal descriptions; they model numbers with a 100 Chart, a 1,000 Book, and a 10,000 Wall Chart; they model fractions with “crazy cakes;” they analyze displays of Mystery Data in tables, line plots, and graphs; and they use equations to model problem situations.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 4  Investigation 2: Sessions 3-4  Arrays and Shares  Investigation 2: Session 1  Seeing Solids and Silhouettes  Investigation 1: Session 1  Landmarks in the Thousands  Investigation 4: Sessions 1-3  Different Shapes, Equal Pieces  Investigation 1: Session 1  The Shape of the Data  Investigation 2: Session 4  Money, Miles, and Large Numbers  Investigation 3: Sessions 2-4  Changes Over Time  Investigation 3: Sessions 7-8  Packages and Groups  Investigation 3: Sessions 1-2  Sunken Ships and Grid Patterns  Investigation 1: Sessions 5-6  Three out of Four Like Spaghetti  Investigation 2: Session 3</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.4.5	<p><b>Second Trimester:</b></p> <p>Identify and translate key words and phrases that imply mathematical operations [7.3]</p>	<p>Students identify and translate key words and phrases that imply mathematical operations throughout the course. For example, students recognize key words to identify division situations.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 4  Investigation 1: Session 4  Arrays and Shares  Investigation 2: Sessions 7-8  Seeing Solids and Silhouettes  Investigation 4: Sessions 1-4  Landmarks in the Thousands  Investigation 2: Sessions 2-4:  Dialogue Box, page 33  Different Shapes, Equal Pieces  Investigation 3: Session 3  The Shape of the Data  Investigation 2: Session 5  Money, Miles, and Large Numbers  Investigation 3: Session 1  Changes Over Time  Investigation 3: Sessions 1-2  Packages and Groups  Investigation 3: Session 10  Sunken Ships and Grid Patterns  Investigation 1: Sessions 5-6:  Dialogue Box, page 41  Three out of Four Like Spaghetti  Investigation 1: Session 4</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.4.8	Use physical materials, models, pictures, or writing to represent mathematical ideas [7.4]	<p>Students use physical materials and diagrams to represent and then communicate mathematical ideas through oral and written formats throughout the course. For example, students use arrays as models for multiplication; they relate cube configurations to two-dimensional drawings, mental images, and verbal descriptions; they model numbers with a 100 Chart, a 1,000 Book, and a 10,000 Wall Chart; they model fractions with “crazy cakes;” they analyze displays of Mystery Data in tables, line plots, and graphs; and they use equations to model problem situations.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 4  Investigation 2: Sessions 3-4  Arrays and Shares  Investigation 2: Session 1  Seeing Solids and Silhouettes  Investigation 1: Session 1  Landmarks in the Thousands  Investigation 4: Sessions 1-3  Different Shapes, Equal Pieces  Investigation 1: Session 1  The Shape of the Data  Investigation 2: Session 4  Money, Miles, and Large Numbers  Investigation 3: Sessions 2-4  Changes Over Time  Investigation 3: Sessions 7-8  Packages and Groups  Investigation 3: Sessions 1-2  Sunken Ships and Grid Patterns  Investigation 1: Sessions 5-6  Three out of Four Like Spaghetti  Investigation 2: Session 3</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.4.5	<p><b>Third Trimester:</b></p> <p>Identify and translate key words and phrases that imply mathematical operations [7.3]</p>	<p>Students identify and translate key words and phrases that imply mathematical operations throughout the course. For example, students recognize key words to identify division situations.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 4  Investigation 1: Session 4  Arrays and Shares  Investigation 2: Sessions 7-8  Seeing Solids and Silhouettes  Investigation 4: Sessions 1-4  Landmarks in the Thousands  Investigation 2: Sessions 2-4:  Dialogue Box, page 33  Different Shapes, Equal Pieces  Investigation 3: Session 3  The Shape of the Data  Investigation 2: Session 5  Money, Miles, and Large Numbers  Investigation 3: Session 1  Changes Over Time  Investigation 3: Sessions 1-2  Packages and Groups  Investigation 3: Session 10  Sunken Ships and Grid Patterns  Investigation 1: Sessions 5-6:  Dialogue Box, page 41  Three out of Four Like Spaghetti  Investigation 1: Session 4</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.4.8	Use physical materials, models, pictures, or writing to represent mathematical ideas [7.4]	<p>Students use physical materials and diagrams to represent and then communicate mathematical ideas through oral and written formats throughout the course. For example, students use arrays as models for multiplication; they relate cube configurations to two-dimensional drawings, mental images, and verbal descriptions; they model numbers with a 100 Chart, a 1,000 Book, and a 10,000 Wall Chart; they model fractions with “crazy cakes;” they analyze displays of Mystery Data in tables, line plots, and graphs; and they use equations to model problem situations.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 4  Investigation 2: Sessions 3-4  Arrays and Shares  Investigation 2: Session 1  Seeing Solids and Silhouettes  Investigation 1: Session 1  Landmarks in the Thousands  Investigation 4: Sessions 1-3  Different Shapes, Equal Pieces  Investigation 1: Session 1  The Shape of the Data  Investigation 2: Session 4  Money, Miles, and Large Numbers  Investigation 3: Sessions 2-4  Changes Over Time  Investigation 3: Sessions 7-8  Packages and Groups  Investigation 3: Sessions 1-2  Sunken Ships and Grid Patterns  Investigation 1: Sessions 5-6  Three out of Four Like Spaghetti  Investigation 2: Session 3</p>

## MATHEMATICAL REASONING

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.4.4	<p><b>First Trimester:</b></p> <p>Use patterns and relationships to solve problems [8.2]</p>	<p>Students use patterns and relationships to solve problems throughout the course. For example, students describe relationships between operations, they match solids and silhouettes, they relate fractions to geometric models and use them to compare and order fractions and benchmarks, they describe and extend geometric and numeric patterns, they relate fractions and decimals, and they use landmarks to describe the nature of a data set.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 4</p> <ul style="list-style-type: none"> <li>Investigation 3: Session 3</li> <li>Arrays and Shares</li> <li>Investigation 3: Session 1</li> <li>Seeing Solids and Silhouettes</li> <li>Investigation 2: Sessions 1-2</li> <li>Landmarks in the Thousands</li> <li>Investigation 2: Sessions 2-4</li> <li>Different Shapes, Equal Pieces</li> <li>Investigation 3: Sessions 1-5</li> <li>The Shape of the Data</li> <li>Investigation 2: Sessions 6-7</li> <li>Money, Miles, and Large Numbers</li> <li>Investigation 2: Sessions 1-2</li> <li>Changes Over Time</li> <li>Investigation 3: Session 5</li> <li>Packages and Groups</li> <li>Investigation 3: Session 3</li> <li>Sunken Ships and Grid Patterns</li> <li>Investigation 2: Sessions 8-9</li> <li>Three Out of Four Like Spaghetti</li> <li>Investigation 1: Sessions 3-4</li> </ul>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.4.6	Apply deductive and inductive reasoning [8.4]	<p>Students apply inductive and deductive reasoning in mathematical situations throughout the course. Students use inductive reasoning as they generalize solution processes and draw conclusions from several trials or examples, and as they sort and classify objects, identify similar attributes, and identify and extend patterns. They reason deductively as they use models, known facts, and properties to draw conclusions.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 4  Investigation 3: Sessions 1-2  Arrays and Shares  Investigation 3: Session 1  Seeing Solids and Silhouettes  Investigation 2: Sessions 3-4  Landmarks in the Thousands  Investigation 1: Session 1  Different Shapes, Equal Pieces  Investigation 1: Sessions 2-4  The Shape of the Data  Investigation 2: Session 4  Money, Miles, and Large Numbers  Investigation 3: Session 1  Changes Over Time  Investigation 3: Sessions 7-8  Packages and Groups  Investigation 1: Session 3  Sunken Ships and Grid Patterns  Investigation 2: Sessions 8-9  Three out of Four Like Spaghetti  Investigation 2: Sessions 5-7</p>



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.4.11	Determine relevant, sufficient information to solve problems [8.7]	<p>Students determine relevant, irrelevant, and/or sufficient information to solve mathematical problems throughout the course. Informational analysis is a fundamental component of the problem-solving process. For example, students analyze the information given in graphs representing the growth patterns of plants and describe in words how each plant grew.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 4  Investigation 3: Session 3  Arrays and Shares  Investigation 3: Session 5  Seeing Solids and Silhouettes  Investigation 1: Session 1  Landmarks in the Thousands  Investigation 2: Session 5  Different Shapes, Equal Pieces  Investigation 3: Session 3  The Shape of the Data  Investigation 2: Session 4  Money, Miles, and Large Numbers  Investigation 1: Sessions 1-2  Changes Over Time  Investigation 3: Session 6  Packages and Groups  Investigation 3: Sessions 1-2  Sunken Ships and Grid Patterns  Investigation 2: Session 1  Three out of Four Like Spaghetti  Investigation 1: Session 1</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.4.4	<p><b>Second Trimester:</b></p> <p>Use patterns and relationships to solve problems [8.2]</p>	<p>Students use patterns and relationships to solve problems throughout the course. For example, students describe relationships between operations, they match solids and silhouettes, they relate fractions to geometric models and use them to compare and order fractions and benchmarks, they describe and extend geometric and numeric patterns, they relate fractions and decimals, and they use landmarks to describe the nature of a data set.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 4  Investigation 3: Session 3  Arrays and Shares  Investigation 3: Session 1  Seeing Solids and Silhouettes  Investigation 2: Sessions 1-2  Landmarks in the Thousands  Investigation 2: Sessions 2-4  Different Shapes, Equal Pieces  Investigation 3: Sessions 1-5  The Shape of the Data  Investigation 2: Sessions 6-7  Money, Miles, and Large Numbers  Investigation 2: Sessions 1-2  Changes Over Time  Investigation 3: Session 5  Packages and Groups  Investigation 3: Session 3  Sunken Ships and Grid Patterns  Investigation 2: Sessions 8-9  Three Out of Four Like Spaghetti  Investigation 1: Sessions 3-4</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.4.6	Apply deductive and inductive reasoning [8.4]	<p>Students apply inductive and deductive reasoning in mathematical situations throughout the course. Students use inductive reasoning as they generalize solution processes and draw conclusions from several trials or examples, and as they sort and classify objects, identify similar attributes, and identify and extend patterns. They reason deductively as they use models, known facts, and properties to draw conclusions.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 4  Investigation 3: Sessions 1-2  Arrays and Shares  Investigation 3: Session 1  Seeing Solids and Silhouettes  Investigation 2: Sessions 3-4  Landmarks in the Thousands  Investigation 1: Session 1  Different Shapes, Equal Pieces  Investigation 1: Sessions 2-4  The Shape of the Data  Investigation 2: Session 4  Money, Miles, and Large Numbers  Investigation 3: Session 1  Changes Over Time  Investigation 3: Sessions 7-8  Packages and Groups  Investigation 1: Session 3  Sunken Ships and Grid Patterns  Investigation 2: Sessions 8-9  Three out of Four Like Spaghetti  Investigation 2: Sessions 5-7</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.4.11	Determine relevant, sufficient information to solve problems [8.7]	<p>Students determine relevant, irrelevant, and/or sufficient information to solve mathematical problems throughout the course. Informational analysis is a fundamental component of the problem-solving process. For example, students analyze the information given in graphs representing the growth patterns of plants and describe in words how each plant grew.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 4  Investigation 3: Session 3  Arrays and Shares  Investigation 3: Session 5  Seeing Solids and Silhouettes  Investigation 1: Session 1  Landmarks in the Thousands  Investigation 2: Session 5  Different Shapes, Equal Pieces  Investigation 3: Session 3  The Shape of the Data  Investigation 2: Session 4  Money, Miles, and Large Numbers  Investigation 1: Sessions 1-2  Changes Over Time  Investigation 3: Session 6  Packages and Groups  Investigation 3: Sessions 1-2  Sunken Ships and Grid Patterns  Investigation 2: Session 1  Three out of Four Like Spaghetti  Investigation 1: Session 1</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.4.4	<p><b>Third Trimester:</b></p> <p>Use patterns and relationships to solve problems [8.2]</p>	<p>Students use patterns and relationships to solve problems throughout the course. For example, students describe relationships between operations, they match solids and silhouettes, they relate fractions to geometric models and use them to compare and order fractions and benchmarks, they describe and extend geometric and numeric patterns, they relate fractions and decimals, and they use landmarks to describe the nature of a data set.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 4  Investigation 3: Session 3  Arrays and Shares  Investigation 3: Session 1  Seeing Solids and Silhouettes  Investigation 2: Sessions 1-2  Landmarks in the Thousands  Investigation 2: Sessions 2-4  Different Shapes, Equal Pieces  Investigation 3: Sessions 1-5  The Shape of the Data  Investigation 2: Sessions 6-7  Money, Miles, and Large Numbers  Investigation 2: Sessions 1-2  Changes Over Time  Investigation 3: Session 5  Packages and Groups  Investigation 3: Session 3  Sunken Ships and Grid Patterns  Investigation 2: Sessions 8-9  Three Out of Four Like Spaghetti  Investigation 1: Sessions 3-4</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.4.6	Apply deductive and inductive reasoning [8.4]	<p>Students apply inductive and deductive reasoning in mathematical situations throughout the course. Students use inductive reasoning as they generalize solution processes and draw conclusions from several trials or examples, and as they sort and classify objects, identify similar attributes, and identify and extend patterns. They reason deductively as they use models, known facts, and properties to draw conclusions.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 4  Investigation 3: Sessions 1-2  Arrays and Shares  Investigation 3: Session 1  Seeing Solids and Silhouettes  Investigation 2: Sessions 3-4  Landmarks in the Thousands  Investigation 1: Session 1  Different Shapes, Equal Pieces  Investigation 1: Sessions 2-4  The Shape of the Data  Investigation 2: Session 4  Money, Miles, and Large Numbers  Investigation 3: Session 1  Changes Over Time  Investigation 3: Sessions 7-8  Packages and Groups  Investigation 1: Session 3  Sunken Ships and Grid Patterns  Investigation 2: Sessions 8-9  Three out of Four Like Spaghetti  Investigation 2: Sessions 5-7</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.4.11	Determine relevant, sufficient information to solve problems [8.7]	<p>Students determine relevant, irrelevant, and/or sufficient information to solve mathematical problems throughout the course. Informational analysis is a fundamental component of the problem-solving process. For example, students analyze the information given in graphs representing the growth patterns of plants and describe in words how each plant grew.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 4  Investigation 3: Session 3  Arrays and Shares  Investigation 3: Session 5  Seeing Solids and Silhouettes  Investigation 1: Session 1  Landmarks in the Thousands  Investigation 2: Session 5  Different Shapes, Equal Pieces  Investigation 3: Session 3  The Shape of the Data  Investigation 2: Session 4  Money, Miles, and Large Numbers  Investigation 1: Sessions 1-2  Changes Over Time  Investigation 3: Session 6  Packages and Groups  Investigation 3: Sessions 1-2  Sunken Ships and Grid Patterns  Investigation 2: Session 1  Three out of Four Like Spaghetti  Investigation 1: Session 1</p>

## MATHEMATICAL CONNECTIONS

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
9.4.3	<p><b>First Trimester:</b></p> <p>Use models, charts, and graphs to interpret information and solve problems [9.3]</p>	<p>Students use models, charts, and graphs to interpret information and solve problems throughout the course. For example, students use arrays to model whole number multiplication.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 4            Investigation 2: Sessions 3-4            Arrays and Shares            Investigation 2: Session 1            Seeing Solids and Silhouettes            Investigation 1: Session 1            Landmarks in the Thousands            Investigation 4: Sessions 1-3            Different Shapes, Equal Pieces            Investigation 1: Session 1            The Shape of the Data            Investigation 2: Session 4            Money, Miles, and Large Numbers            Investigation 3: Sessions 2-4            Changes Over Time            Investigation 3: Sessions 7-8            Packages and Groups            Investigation 3: Sessions 1-2            Sunken Ships and Grid Patterns            Investigation 1: Sessions 5-6            Three out of Four Like Spaghetti            Investigation 2: Session 3</p>



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
9.4.3	<p><b>Second Trimester:</b></p> <p>Use models, charts, and graphs to interpret information and solve problems [9.3]</p>	<p>Students use models, charts, and graphs to interpret information and solve problems throughout the course. For example, students use arrays to model whole number multiplication.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 4  Investigation 2: Sessions 3-4</p> <p>Arrays and Shares  Investigation 2: Session 1</p> <p>Seeing Solids and Silhouettes  Investigation 1: Session 1</p> <p>Landmarks in the Thousands  Investigation 4: Sessions 1-3</p> <p>Different Shapes, Equal Pieces  Investigation 1: Session 1</p> <p>The Shape of the Data  Investigation 2: Session 4</p> <p>Money, Miles, and Large Numbers  Investigation 3: Sessions 2-4</p> <p>Changes Over Time  Investigation 3: Sessions 7-8</p> <p>Packages and Groups  Investigation 3: Sessions 1-2</p> <p>Sunken Ships and Grid Patterns  Investigation 1: Sessions 5-6</p> <p>Three out of Four Like Spaghetti  Investigation 2: Session 3</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
9.4.3	<p><b>Third Trimester:</b></p> <p>Use models, charts, and graphs to interpret information and solve problems [9.3]</p>	<p>Students use models, charts, and graphs to interpret information and solve problems throughout the course. For example, students use arrays to model whole number multiplication.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 4  Investigation 2: Sessions 3-4</p> <p>Arrays and Shares  Investigation 2: Session 1</p> <p>Seeing Solids and Silhouettes  Investigation 1: Session 1</p> <p>Landmarks in the Thousands  Investigation 4: Sessions 1-3</p> <p>Different Shapes, Equal Pieces  Investigation 1: Session 1</p> <p>The Shape of the Data  Investigation 2: Session 4</p> <p>Money, Miles, and Large Numbers  Investigation 3: Sessions 2-4</p> <p>Changes Over Time  Investigation 3: Sessions 7-8</p> <p>Packages and Groups  Investigation 3: Sessions 1-2</p> <p>Sunken Ships and Grid Patterns  Investigation 1: Sessions 5-6</p> <p>Three out of Four Like Spaghetti  Investigation 2: Session 3</p>

**Investigations in Number, Data, and Space  
to the  
Clark County School District Guide for Benchmarks**

**Grade Five**

**NUMBERS, NUMBER SENSE, AND COMPUTATION**

<b>Nevada Standard</b>	<b>Clark County School District Guide for Benchmarks</b>	<b>Investigations in Number, Data, and Space</b>
1.5.7	<p><b>First Trimester:</b> When rounding, identify which place value will be most helpful in estimating an answer; determine the reasonableness of the answer [1.4]</p>	<p>Between Never and Always Ten-Minute Math: Nearest Answer Building on Numbers You Know Investigation 1: Session 2 Investigation 3: Sessions 1-6 Investigation 5: Sessions 1-2 Measurement Benchmarks Ten-Minute Math: Estimation and Number Sense Data: Kids, Cats, and Ads Investigation 3: Sessions 1-3 Investigation 4: Sessions 1-3</p>
1.5.1	<p>Immediately recall and use and apply basic facts of multiplication and division through the 12's [1.16]</p>	<p>Mathematical Thinking at Grade 5 Investigation 1: Sessions 1-3 Investigation 2: Sessions 1-4 Investigation 3: Sessions 1-5 Picturing Polygons Ten-Minute Math: Multiple and Factor BINGO Building on Numbers You Know Investigation 1: Sessions 3-4 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-10 Investigation 5: Sessions 3-4 Containers and Cubes Investigation 1: Sessions 1-5 Investigation 4: Sessions 7-9 Ten-Minute Math: Counting Around the Class</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.5.5	Multiply multi-digit numbers by two-digit numbers, including powers of 10 [1.20]	Mathematical Thinking at Grade 5 Investigation 1: Sessions 1-3 Investigation 2: Sessions 1-4 Investigation 3: Sessions 1-5 Picturing Polygons Ten-Minute Math: Multiple and Factor BINGO Building on Numbers You Know Investigation 1: Sessions 3-4 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-10 Investigation 5: Sessions 4-6 Containers and Cubes Investigation 1: Sessions 1-5 Investigation 4: Sessions 7-9 Ten-Minute Math: Counting Around the Class
1.5.5	Divide multi-digit numbers by two-digit numbers, including powers of 10 [1.21]	Mathematical Thinking at Grade 5 Investigation 2: Session 1, page 33 Building on Numbers You Know Investigation 1: Sessions 3-4 Investigation 5: Sessions 4-6
1.5.9	Use models and drawings to identify, compare, add, and subtract fractions with like denominators and to solve problems [1.24]	Name That Portion Investigation 1: Sessions 5-6 Investigation 2: Sessions 1-9 Investigation 3: Session 7 Data: Kids, Cats, and Ads Investigation 4: Session 3
1.5.4	Add and subtract decimals (same number of decimal places) [1.2]	Name That Portion Investigation 3: Sessions 2-4, 7 Measurement Benchmarks Ten-Minute Math: Estimation and Number Sense

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.5.2	Add, subtract, multiply, divide whole numbers, and apply to practical situations [1.30]	Mathematical Thinking at Grade 5 Investigation 1: Sessions 1-6 Investigation 2: Sessions 2-5 Investigation 3: Sessions 1-5 Investigation 4: Sessions 2-6 Picturing Polygons Ten-Minute Math: Multiple and Factor BINGO Between Never and Always Investigation 1: Session 7 Building on Numbers You Know Investigation 1: Sessions 1-8 Investigation 2: Sessions 1-7 Investigation 5: Sessions 3-7
1.5.9	Compare and order fractions and/or decimals with like and unlike denominators [1.10]	Name That Portion Investigation 1: Sessions 5-7 Investigation 2: Sessions 4-8 Investigation 3: Sessions 2-6
1.5.9	Use models and drawings to identify, compare, add, and subtract fractions with like denominators and to solve problems [1.24]	Name That Portion Investigation 1: Sessions 5-6 Investigation 2: Sessions 1-9 Investigation 3: Session 7 Data: Kids, Cats, and Ads Investigation 4: Session 3
1.6.9	Add and subtract fractions with like denominators [1.25]	Name That Portion Investigation 1: Session 1: Teacher Note, page 9 Investigation 2: Sessions 1-3, 6-9 Investigation 3: Sessions 5-6: Dialogue Box, page 91 Session 8: Extension, page 99

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.5.3	Use order of operations to solve problems	Name That Portion Ten-Minute Math: Seeing Numbers Building on Numbers You Know Investigation 1: Sessions 3-4: Teacher Note, pages 23-24 Sessions 6-8: Teacher Note, page 34; Dialogue Box, page 35 Investigation 3: Sessions 1-3, 7-10 Investigation 4: Session 1
1.5.6	<b>Second Trimester:</b> Compare and order integers (negative and positive numbers) within the context of practical situations and plot those numbers on a number line [1.8]	Mathematical Thinking at Grade 5 Investigation 4: Session 1: Teacher Note, page 79 Picturing Polygons Investigation 1: Sessions 3-4 Investigation 2: Sessions 4-5
	Use estimation and mental computation in appropriate situations to solve problems 1.31]	Between Never and Always Ten-Minute Math: Nearest Answer Building on Numbers You Know Investigation 3: Sessions 1-6 Investigation 5: Sessions 1-2 Measurement Benchmarks Ten-Minute Math: Estimation and Number Sense Patterns of Change Ten-Minute Math: Nearest Answer
1.5.9	Identify and/or generate equivalent fractions 1.12]	Name That Portion Investigation 1: Sessions 2-6 Investigation 2: Sessions 3-8 Investigation 3: Sessions 1 Between Never and Always Investigation 1: Sessions 1-2 Data: Kids, Cats, and Ads Investigation 3: Session 1

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
1.5.8	<b>Third Trimester:</b> Identify and use place value up to 1,000,000 and decimals to the hundredth place [1.2]	Mathematical Thinking at Grade 5 Investigation 2: Session 5 Investigation 3: Session 1 Investigation 4: Sessions 1-6 Name That Portion Investigation 3: Sessions 1-8 Between Never and Always Investigation 1: Sessions 1-2 Building on Numbers You Know Investigation 2: Session 3: Teacher Note, page 54 Investigation 4: Sessions 1-2 Investigation 5: Sessions 4-7
1.5.4	Multiply and divide decimals by whole numbers in problems representing practical situations [1.28]	Name That Portion Investigation 3: Sessions 1, 7 Measurement Benchmarks Ten-Minute Math: Estimation and Number Sense

### PATTERNS, FUNCTIONS, AND ALGEBRA

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
2.5.1	<b>First Trimester:</b> Identify, describe, and explain patterns and relationships in the number system (e.g., patterns formed by triangular numbers, perfect squares, arithmetic and geometric sequences) using concrete materials, paper, pencils, and calculators [2.2]	Mathematical Thinking at Grade 5 Investigation 2: Sessions 1-4 Investigation 3: Session 1 Name That Portion Investigation 3: Sessions 5-6: Activity, pages 86-88 Building on Numbers You Know Investigation 1: Sessions 1-5 Patterns of Change Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-5 Investigation 3: Sessions 1-7 Ten-Minute Math: Graph Stories

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Containers and Cubes Ten-Minute Math: Counting Around the Class
2.5.3	Using whole numbers as a replacement set, find possible solutions to such inequalities as $8 + 4 > n$ [2.3]	Grade 5 students solve equations of the form $3 \times \_\_\_ = 72$ and complete number sentences. <b>References:</b> Mathematical Thinking at Grade 5 Investigation 3: Sessions 2-5: Teacher Note, page 63 Investigation 4: Session 1 Building on Numbers You Know Investigation 1: Sessions 1-4, 6-8 Investigation 2: Sessions 5-6 Investigation 3: Session 10
1.5.3	Use and interpret operational and relational symbols	Mathematical Thinking at Grade 5 Investigation 1: Sessions 1-3 Investigation 2: Sessions 1-5 Investigation 3: Sessions 1-5 Investigation 4: Sessions 1, 5-6 Name That Portion Investigation 2: Sessions 1-3, 6-9 Investigation 3: Sessions 5-6, 8 Building on Numbers You Know Investigation 1: Sessions 1-4, 6-8 Investigation 2: Sessions 1-7 Investigation 3: Sessions 1-10 Investigation 5: Sessions 3-7 Containers and Cubes Investigation 1: Sessions 1-4 Investigation 4: Sessions 7-9, pages 88-89



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
2.5.5	<p><b>Second Trimester:</b></p> <p>Generate number sequences given the first term of the sequence and a simple computation rule (e.g., if the first term of a sequence is 4 and the rule is “add 6,” then the sequence can be written as 4, 10, 16, 22...) [2.6]</p>	<p>Mathematical Thinking at Grade 5  Investigation 2: Sessions 1-4  Investigation 3: Session 1  Name That Portion  Investigation 3: Sessions 5-6:  Activity, pages 86-88  Building on Numbers You Know  Investigation 1: Sessions 1-5  Patterns of Change  Investigation 1: Sessions 1-4  Investigation 2: Sessions 1-5  Investigation 3: Sessions 1-7  Ten-Minute Math: Graph Stories  Containers and Cubes  Ten-Minute Math: Counting  Around the Class</p>
2.5.4	<p><b>Third Trimester:</b></p> <p>Use variables in open sentences [2.4]</p>	<p>Students use variables in <i>Geo-Logo</i> and in data analysis.  <b>References:</b>  Mathematical Thinking at Grade 5  Investigation 3: Sessions 2-4  Picturing Polygons  Investigation 1: Sessions 3-4  Investigation 2: Sessions 4-7  Investigation 3: Sessions 1-2, 4-6  Building on Numbers You Know  Investigation 2: Sessions 5-6  Investigation 5: Sessions 1-2  Data: Kids, Cats, and Ads  Investigation 2: Session 1</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
2.5.4	Use variables to describe simple functions and relationships [2.5]	<p>Students use variables in <i>Geo-Logo</i> and in data analysis.</p> <p><b>References:</b>            Mathematical Thinking at Grade 5                Investigation 3: Sessions 2-4            Picturing Polygons                Investigation 1: Sessions 3-4                Investigation 2: Sessions 4-7                Investigation 3: Sessions 1-2, 4-6            Building on Numbers You Know                Investigation 2: Sessions 5-6                Investigation 5: Sessions 1-2            Data: Kids, Cats, and Ads                Investigation 2: Session 1</p>
2.5.7	Solve simple equations using a variety of methods including inverse operations, mental mathematics, and estimation and verify [2.7]	<p>Grade 5 students solve equations of the form <math>3 \times \underline{\quad} = 72</math> and complete number sentences.</p> <p><b>References:</b>            Mathematical Thinking at Grade 5                Investigation 3: Sessions 2-5:                    Teacher Note, page 63                Investigation 4: Session 1            Building on Numbers You Know                Investigation 1: Sessions 1-4, 6-8                Investigation 2: Sessions 5-6                Investigation 3: Session 10</p>

## MEASUREMENT

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
3.5.4	<p><b>First Trimester:</b></p> <p>Determine totals and change due for monetary amounts in problem solving situations [3.4]</p>	<p>Students relate decimals in money to decimals used in other situations.</p> <p><b>Reference:</b>            Name That Portion                Investigation 3: Session 1,                page 67</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
3.5.5	Communicate the differences between perimeter and area [3.7]	Mathematical Thinking at Grade 5 Investigation 1: Sessions 1-3 Picturing Polygons Investigation 3: Sessions 4-6: Extension, page 108 Measurement Benchmarks Investigation 1: Sessions 5-6 Name That Portion Investigation 1: Sessions 2-4 Investigation 3: Sessions 2, 8
3.5.6	Identify equivalent periods of time, including relationships between and among seconds, minutes, hours, days, months, and years, such as 60 sec. = 1 min. [3.8]	Measurement Benchmarks Investigation 3: Sessions 1-3
3.5.3	<b>Second Trimester:</b> Estimate measures of length, volume, capacity, quantity, and weight, and communicate the degree of accuracy needed and when a more precise measure is required [3.3]	Picturing Polygons Investigation 2: Sessions 8-9 Measurement Benchmarks Investigation 1: Sessions 1-3 Investigation 3: Session 1
	Describe and determine the perimeter and area of polygons including right triangles and rectangles [squares] [3.5, 3.6]	Mathematical Thinking at Grade 5 Investigation 1: Sessions 1-3 Picturing Polygons Investigation 3: Sessions 4-6: Extension, page 108

## SPATIAL RELATIONS AND GEOMETRY

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
4.5.4	<p><b>Second Trimester:</b></p> <p>Identify, and classify two- and three-dimensional figures by relevant properties, including the number of vertices and edges and the number and shapes of faces [4.1]</p>	<p>Mathematical Thinking at Grade 5            Ten-Minute Math: Quick Images            Picturing Polygons            Investigation 1: Sessions 1-4            Investigation 2: Sessions 1-9            Investigation 3: Sessions 1-6            Building on Numbers You Know            Ten-Minute Math: Quick Images            Containers and Cubes            Investigation 1: Sessions 1-4            Investigation 2: Sessions 1-5            Investigation 3: Sessions 1-4            Investigation 4: Sessions 1-9            Data: Kids, Cats, and Ads            Ten-Minute Math: Volume and Surface Area</p>
4.5.6	<p>Identify, define, draw, and describe geometric figures, points, lines, line segments, rays, angles, and planes [4.2]</p>	<p>Picturing Polygons            Investigation 1: Sessions 3-4            Investigation 2: Sessions 1-9            Investigation 3: Sessions 1-3, 5-6</p>
	<p>Identify, define, draw, and describe intersecting, parallel, and perpendicular lines [4.3]</p>	<p>Students explore concepts of intersecting, parallel, and perpendicular lines as they investigate the relationships between sides of polygons.  <b>References:</b>            Picturing Polygons            Investigation 2: Sessions 1-7</p>
4.5.1	<p>Draw, and classify triangles according to their properties; acute, right, and obtuse angles and triangles [4.4]</p>	<p>Picturing Polygons            Investigation 2: Sessions 1-9            Investigation 3: Sessions 1-6</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
4.5.1	Identify and draw circles and parts of circles and describe the relationships between the various parts such as arcs, diameter, and central angles [4.5]	<p>Students investigate properties and relationships of circles as they explore fractional areas of a clock face and as they construct circle graphs.</p> <p><b>References:</b>  Picturing Polygons  Investigation 2: Sessions 1-9  Investigation 3: Sessions 1-2  Name That Portion  Investigation 1: Session 7, page 31  Investigation 2: Sessions 1-2  Investigation 3: Session 8  Investigation 4: Sessions 2-7</p>
4.5.2	Identify shapes that have congruence, similarity, and/or symmetry using transformational motions such as translation/slide, rotation/turn, reflection/flip, and enlargement/reduction [4.6]	Picturing Polygons Investigation 2: Sessions 1-9 Investigation 3: Sessions 4-6 Measurement Benchmarks Investigation 1: Sessions 7-8
4.5.4	Identify and predict the results of combining, dividing, and changing of shapes into other shapes [4.8]	Mathematical Thinking at Grade 5 Ten-Minute Math: Quick Images Picturing Polygons Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-9 Investigation 3: Sessions 1-6 Building on Numbers You Know Investigation 3: Sessions 1-3 Investigation 5: Sessions 1-2 Containers and Cubes Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-5 Investigation 3: Sessions 1-4 Investigation 4: Sessions 1-9 Data: Kids, Cats, and Ads Ten-Minute Math: Volume and Surface Area

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
4.5.3	Using a grid, identify coordinates for a given point or locate points of given coordinates in the first quadrant [4.9]	Picturing Polygons Investigation 1: Sessions 3-4 Investigation 2: Sessions 4-7, 9 Investigation 3: Sessions 1-2, 5-6

## DATA ANALYSIS

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
5.5.1	<b>Second Trimester:</b> Collect, organize, read, and interpret data using a variety of graphic representations including tables, line plots, stem and leaf plots, scatter plots, and histograms [5.1]	Mathematical Thinking at Grade 5 Ten-Minute Math: Exploring Data Name That Portion Investigation 4: Sessions 1-7 Ten-Minute Math: Exploring Data Between Never and Always Investigation 1: Sessions 3-5 Investigation 2: Session 3 Measurement Benchmarks Investigation 2: Sessions 7-8 Investigation 3: Sessions 1-2 Patterns of Change Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-5 Investigation 3: Sessions 1-6 Ten-Minute Math: Graph Stories Data: Kids, Cats, and Ads Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-3 Investigation 3: Sessions 1-4 Investigation 4: Sessions 1-3 Investigation 5: Sessions 1-5

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
5.5.1	Use data from graphs, tables, and charts to explain conclusions and make predictions [5.4]	Mathematical Thinking at Grade 5 Ten-Minute Math: Exploring Data Name That Portion Investigation 4: Sessions 1-7 Ten-Minute Math: Exploring Data Between Never and Always Investigation 1: Sessions 3-5 Investigation 2: Session 3 Measurement Benchmarks Investigation 2: Sessions 7-8 Investigation 3: Sessions 1-2 Patterns of Change Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-5 Investigation 3: Sessions 1-6 Ten-Minute Math: Graph Stories Data: Kids, Cats, and Ads Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-3 Investigation 3: Sessions 1-4 Investigation 4: Sessions 1-3 Investigation 5: Sessions 1-5
5.5.4	Model and compute measures of central tendency including mean, median, and mode [5.7]	Between Never and Always Investigation 1: Sessions 3-6 Data: Kids, Cats, and Ads Investigation 1: Sessions 1-4 Investigation 2: Session 1
5.5.6	<b>Third Trimester:</b> Describe the limitations of various graph formats [5.2]	Picturing Polygons Investigation 1: Session 4 Investigation 2: Sessions 4-5 Investigation 3: Sessions 1-2, 4-6 Between Never and Always Investigation 2: Sessions 1-3 Measurement Benchmarks Investigation 2: Sessions 7-8 Investigation 3: Sessions 1-2

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Patterns of Change Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-5 Investigation 3: Sessions 1-6 Ten-Minute Math: Graph Stories Data: Kids, Cats, and Ads Investigation 1: Sessions 1-3 Investigation 2: Sessions 1-3
5.5.6	Select appropriate type of graph to accurately represent the data and justify the selection [5.3]	Picturing Polygons Investigation 1: Session 4 Investigation 2: Sessions 4-5 Investigation 3: Sessions 1-2, 4-6 Between Never and Always Investigation 2: Sessions 1-3 Measurement Benchmarks Investigation 2: Sessions 7-8 Investigation 3: Sessions 1-2 Patterns of Change Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-5 Investigation 3: Sessions 1-6 Ten-Minute Math: Graph Stories Data: Kids, Cats, and Ads Investigation 1: Sessions 1-3 Investigation 2: Sessions 1-3
5.3.2	Conduct simple probability experiments using concrete materials and represent the results using fractions [5.5]	Between Never and Always Investigation 1: Sessions 1-7 Investigation 2: Sessions 1-5 Building on Numbers You Know Ten-Minute Math: What Is Likely?



## PROBLEM SOLVING

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.5.5	<p><b>First Trimester:</b></p> <p>Verify, interpret, and evaluate results determining an efficient strategy for the given situation [6.3]</p>	<p>Students verify, interpret, and evaluate results with respect to the original problem situation, determining an efficient strategy for the given situation, throughout the course. For example, students make generalizations regarding data and patterns given particular examples, and they formulate problem-solving strategies by trying several options and discovering “what works.”</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 5            Ten-Minute Math: Exploring Data            Picturing Polygons                Investigation 2: Sessions 1-3            Name That Portion                Investigation 4: Sessions 5-6            Between Never and Always                Investigation 1: Session 5            Building on Numbers You Know                Investigation 1: Sessions 3-4            Measurement Benchmarks                Investigation 1: Sessions 7-8            Patterns of Change                Investigation 1: Sessions 3-4            Containers and Cubes                Investigation 2: Session 5            Data: Kids, Cats, and Ads                Investigation 1: Session 1-4</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.5.7	Apply multi-step, integrated, mathematical problem-solving strategies [6.5.]	<p>Students apply multi-step, integrated, mathematical problem-solving strategies throughout the course. The investigative nature of the curriculum naturally lends itself to multi-step, integrated problem solving. Students are encouraged to freely discuss and exchange ideas with their classmates and teacher, facilitating a greater chance of following through to a successful resolution of their problem solving activities.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 5  Investigation 4: Sessions 5-6  Picturing Polygons  Investigation 3: Sessions 5-6  Name That Portion  Investigation 4: Session 2  Between Never and Always  Investigation 1: Sessions 3-4  Building on Numbers You Know  Investigation 4: Session 2  Measurement Benchmarks  Investigation 3: Session 3  Patterns of Change  Investigation 3: Session 3  Containers and Cubes  Investigation 4: Sessions 7-9  Data: Kids, Cats, and Ads  Investigation 2: Session 3</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.5.10	Interpret and solve problems by paraphrasing, identifying necessary and extraneous information, selecting and justifying efficient methods and/or strategies, and ensuring the answer is reasonable [6.7]	<p>Students interpret and solve a variety of mathematical problems by paraphrasing, identifying necessary and extraneous information, selecting and justifying efficient methods and/or strategies, and ensuring the answer is reasonable, throughout the course. For example, students interpret information given in number puzzles which may have one, many, or no solutions.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 5  Investigation 1: Sessions 1-6  Picturing Polygons  Investigation 3: Sessions 5-6  Name That Portion  Investigation 4: Sessions 1-7  Between Never and Always  Investigation 2: Sessions 1-5  Building on Numbers You Know  Investigation 5: Sessions 1-7  Measurement Benchmarks  Investigation 1: Sessions 1-8  Patterns of Change  Investigation 3: Sessions 1-7  Containers and Cubes  Investigation 3: Sessions 1-4  Data: Kids, Cats, and Ads  Investigation 5: Sessions 1-5</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.5.5	<p><b>Second Trimester:</b></p> <p>Verify, interpret, and evaluate results determining an efficient strategy for the given situation [6.3]</p>	<p>Students verify, interpret, and evaluate results with respect to the original problem situation, determining an efficient strategy for the given situation, throughout the course. For example, students make generalizations regarding data and patterns given particular examples, and they formulate problem-solving strategies by trying several options and discovering “what works.”</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 5  Ten-Minute Math: Exploring Data  Picturing Polygons  Investigation 2: Sessions 1-3  Name That Portion  Investigation 4: Sessions 5-6  Between Never and Always  Investigation 1: Session 5  Building on Numbers You Know  Investigation 1: Sessions 3-4  Measurement Benchmarks  Investigation 1: Sessions 7-8  Patterns of Change  Investigation 1: Sessions 3-4  Containers and Cubes  Investigation 2: Session 5  Data: Kids, Cats, and Ads  Investigation 1: Session 1-4</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.5.7	Apply multi-step, integrated, mathematical problem-solving strategies [6.5.]	<p>Students apply multi-step, integrated, mathematical problem-solving strategies throughout the course. The investigative nature of the curriculum naturally lends itself to multi-step, integrated problem solving. Students are encouraged to freely discuss and exchange ideas with their classmates and teacher, facilitating a greater chance of following through to a successful resolution of their problem solving activities.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 5  Investigation 4: Sessions 5-6  Picturing Polygons  Investigation 3: Sessions 5-6  Name That Portion  Investigation 4: Session 2  Between Never and Always  Investigation 1: Sessions 3-4  Building on Numbers You Know  Investigation 4: Session 2  Measurement Benchmarks  Investigation 3: Session 3  Patterns of Change  Investigation 3: Session 3  Containers and Cubes  Investigation 4: Sessions 7-9  Data: Kids, Cats, and Ads  Investigation 2: Session 3</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.5.10	Interpret and solve problems by paraphrasing, identifying necessary and extraneous information, selecting and justifying efficient methods and/or strategies, and ensuring the answer is reasonable [6.7]	<p>Students interpret and solve a variety of mathematical problems by paraphrasing, identifying necessary and extraneous information, selecting and justifying efficient methods and/or strategies, and ensuring the answer is reasonable, throughout the course. For example, students interpret information given in number puzzles which may have one, many, or no solutions.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 5  Investigation 1: Sessions 1-6  Picturing Polygons  Investigation 3: Sessions 5-6  Name That Portion  Investigation 4: Sessions 1-7  Between Never and Always  Investigation 2: Sessions 1-5  Building on Numbers You Know  Investigation 5: Sessions 1-7  Measurement Benchmarks  Investigation 1: Sessions 1-8  Patterns of Change  Investigation 3: Sessions 1-7  Containers and Cubes  Investigation 3: Sessions 1-4  Data: Kids, Cats, and Ads  Investigation 5: Sessions 1-5</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.5.5	<p><b>Third Trimester:</b></p> <p>Verify, interpret, and evaluate results determining an efficient strategy for the given situation [6.3]</p>	<p>Students verify, interpret, and evaluate results with respect to the original problem situation, determining an efficient strategy for the given situation, throughout the course. For example, students make generalizations regarding data and patterns given particular examples, and they formulate problem-solving strategies by trying several options and discovering “what works.”</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 5  Ten-Minute Math: Exploring Data  Picturing Polygons  Investigation 2: Sessions 1-3  Name That Portion  Investigation 4: Sessions 5-6  Between Never and Always  Investigation 1: Session 5  Building on Numbers You Know  Investigation 1: Sessions 3-4  Measurement Benchmarks  Investigation 1: Sessions 7-8  Patterns of Change  Investigation 1: Sessions 3-4  Containers and Cubes  Investigation 2: Session 5  Data: Kids, Cats, and Ads  Investigation 1: Session 1-4</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.5.7	Apply multi-step, integrated, mathematical problem-solving strategies [6.5.]	<p>Students apply multi-step, integrated, mathematical problem-solving strategies throughout the course. The investigative nature of the curriculum naturally lends itself to multi-step, integrated problem solving. Students are encouraged to freely discuss and exchange ideas with their classmates and teacher, facilitating a greater chance of following through to a successful resolution of their problem solving activities.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 5  Investigation 4: Sessions 5-6  Picturing Polygons  Investigation 3: Sessions 5-6  Name That Portion  Investigation 4: Session 2  Between Never and Always  Investigation 1: Sessions 3-4  Building on Numbers You Know  Investigation 4: Session 2  Measurement Benchmarks  Investigation 3: Session 3  Patterns of Change  Investigation 3: Session 3  Containers and Cubes  Investigation 4: Sessions 7-9  Data: Kids, Cats, and Ads  Investigation 2: Session 3</p>



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
6.5.10	Interpret and solve problems by paraphrasing, identifying necessary and extraneous information, selecting and justifying efficient methods and/or strategies, and ensuring the answer is reasonable [6.7]	<p>Students interpret and solve a variety of mathematical problems by paraphrasing, identifying necessary and extraneous information, selecting and justifying efficient methods and/or strategies, and ensuring the answer is reasonable, throughout the course. For example, students interpret information given in number puzzles which may have one, many, or no solutions.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 5  Investigation 1: Sessions 1-6  Picturing Polygons  Investigation 3: Sessions 5-6  Name That Portion  Investigation 4: Sessions 1-7  Between Never and Always  Investigation 2: Sessions 1-5  Building on Numbers You Know  Investigation 5: Sessions 1-7  Measurement Benchmarks  Investigation 1: Sessions 1-8  Patterns of Change  Investigation 3: Sessions 1-7  Containers and Cubes  Investigation 3: Sessions 1-4  Data: Kids, Cats, and Ads  Investigation 5: Sessions 1-5</p>

## MATHEMATICAL COMMUNICATION

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.5.6	<p><b>First Trimester:</b></p> <p>Identify and translate key words and phrases that imply mathematical operations [7.3]</p>	<p>Students identify and translate key words and phrases that imply mathematical operations throughout the course. For example, students recognize key words to identify and distinguish multiplication and division situations.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 5            Investigation 1: Sessions 4-6            Picturing Polygons            Investigation 2: Sessions 1-3            Name That Portion            Investigation 1: Sessions 3-4            Between Never and Always            Investigation 1: Sessions 3-4            Building on Numbers You Know            Investigation 1: Session 1            Measurement Benchmarks            Investigation 1: Session 4            Patterns of Change            Investigation 3: Session 2            Containers and Cubes            Investigation 1: Sessions 1-2            Data: Kids, Cats, and Ads            Investigation 2: Session 2</p>
7.5.8	<p>Use physical materials, diagrams, and tables to represent and then communicate mathematical ideas [7.4]</p>	<p>Grade 5 students use physical materials, diagrams, and tables to represent and then communicate mathematical ideas throughout the course. Indeed, the fundamental emphasis of this curriculum is modeling problem situations. Students are encouraged to devise their own problem-solving strategies and representations, so that it is usually the case that a</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
		<p>wide variety of representations will be created for any given problem. Students gain experience with several different types of graphs, including real graphs, bar graphs, line graphs, and line plots. Students frequently construct and complete tables as they analyze patterns and functions and collect and interpret data. Students use equations to represent and solve problems.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 5  Investigation 1: Sessions 1-3  Picturing Polygons  Investigation 1: Sessions 3-4  Name That Portion  Investigation 4: Sessions 1-7  Between Never and Always  Investigation 2: Sessions 1-2  Building on Numbers You Know  Investigation 4: Sessions 1-2  Measurement Benchmarks  Investigation 1: Sessions 5-6  Patterns of Change  Investigation 1: Sessions 1-4  Containers and Cubes  Investigation 1: Sessions 1-2  Data: Kids, Cats, and Ads  Investigation 1: Sessions 1-4</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.5.16	Express mathematical ideas and use them to define, compare, and solve problems orally and in writing [7.8]	<p>Grade 5 students express mathematical ideas and use them to define, compare, and solve problems orally and in writing throughout the course. The Dialogue Box is a feature that appears with many investigations and contains the text of discussions between teacher and students in which the teacher encourages the students to express and share mathematical ideas and solution strategies.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 5  Investigation 2: Sessions 1-4  Picturing Polygons  Investigation 2: Sessions 1-3  Name That Portion  Investigation 2: Session 6  Between Never and Always  Investigation 2: Sessions 1-2  Building on Numbers You Know  Investigation 2: Sessions 1-2  Measurement Benchmarks  Investigation 1: Session 4  Patterns of Change  Investigation 1: Sessions 3-4  Containers and Cubes  Investigation 3: Sessions 1-2  Data: Kids, Cats, and Ads  Investigation 3: Session 4</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.5.6	<p><b>Second Trimester:</b></p> <p>Identify and translate key words and phrases that imply mathematical operations [7.3]</p>	<p>Students identify and translate key words and phrases that imply mathematical operations throughout the course. For example, students recognize key words to identify and distinguish multiplication and division situations.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 5  Investigation 1: Sessions 4-6  Picturing Polygons  Investigation 2: Sessions 1-3  Name That Portion  Investigation 1: Sessions 3-4  Between Never and Always  Investigation 1: Sessions 3-4  Building on Numbers You Know  Investigation 1: Session 1  Measurement Benchmarks  Investigation 1: Session 4  Patterns of Change  Investigation 3: Session 2  Containers and Cubes  Investigation 1: Sessions 1-2  Data: Kids, Cats, and Ads  Investigation 2: Session 2</p>
7.5.8	<p>Use physical materials, diagrams, and tables to represent and then communicate mathematical ideas [7.4]</p>	<p>Grade 5 students use physical materials, diagrams, and tables to represent and then communicate mathematical ideas throughout the course. Indeed, the fundamental emphasis of this curriculum is modeling problem situations. Students are encouraged to devise their own problem-solving strategies and representations, so that it is usually the case that a wide variety of representations will</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	<p>be created for any given problem. Students gain experience with several different types of graphs, including real graphs, bar graphs, line graphs, and line plots. Students frequently construct and complete tables as they analyze patterns and functions and collect and interpret data. Students use equations to represent and solve problems.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 5  Investigation 1: Sessions 1-3  Picturing Polygons  Investigation 1: Sessions 3-4  Name That Portion  Investigation 4: Sessions 1-7  Between Never and Always  Investigation 2: Sessions 1-2  Building on Numbers You Know  Investigation 4: Sessions 1-2  Measurement Benchmarks  Investigation 1: Sessions 5-6  Patterns of Change  Investigation 1: Sessions 1-4  Containers and Cubes  Investigation 1: Sessions 1-2  Data: Kids, Cats, and Ads  Investigation 1: Sessions 1-4</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
7.5.16	Express mathematical ideas and use them to define, compare, and solve problems orally and in writing [7.8]	<p>Grade 5 students express mathematical ideas and use them to define, compare, and solve problems orally and in writing throughout the course. The Dialogue Box is a feature that appears with many investigations and contains the text of discussions between teacher and students in which the teacher encourages the students to express and share mathematical ideas and solution strategies.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 5  Investigation 2: Sessions 1-4  Picturing Polygons  Investigation 2: Sessions 1-3  Name That Portion  Investigation 2: Session 6  Between Never and Always  Investigation 2: Sessions 1-2  Building on Numbers You Know  Investigation 2: Sessions 1-2  Measurement Benchmarks  Investigation 1: Session 4  Patterns of Change  Investigation 1: Sessions 3-4  Containers and Cubes  Investigation 3: Sessions 1-2  Data: Kids, Cats, and Ads  Investigation 3: Session 4</p>
7.5.6	<p><b>Third Trimester:</b></p> Identify and translate key words and phrases that imply mathematical operations [7.3]	Students identify and translate key words and phrases that imply mathematical operations throughout the course. For example, students recognize key words to identify and distinguish multiplication and division situations.

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	<p><b>Sample References:</b>            Mathematical Thinking at Grade 5                Investigation 1: Sessions 4-6            Picturing Polygons                Investigation 2: Sessions 1-3            Name That Portion                Investigation 1: Sessions 3-4            Between Never and Always                Investigation 1: Sessions 3-4            Building on Numbers You Know                Investigation 1: Session 1            Patterns of Change                Investigation 3: Session 2            Containers and Cubes                Investigation 1: Sessions 1-2            Data: Kids, Cats, and Ads                Investigation 2: Session 2</p>
7.5.8	Use physical materials, diagrams, and tables to represent and then communicate mathematical ideas [7.4]	<p>Grade 5 students use physical materials, diagrams, and tables to represent and then communicate mathematical ideas throughout the course. Indeed, the fundamental emphasis of this curriculum is modeling problem situations. Students are encouraged to devise their own problem-solving strategies and representations, so that it is usually the case that a wide variety of representations will be created for any given problem. Students gain experience with several different types of graphs, including real graphs, bar graphs, line graphs, and line plots. Students frequently construct and complete tables as they analyze patterns and functions and collect and interpret data. Students use equations to represent and solve problems.</p>



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	<p><b>Sample References:</b>            Mathematical Thinking at Grade 5                Investigation 1: Sessions 1-3            Picturing Polygons                Investigation 1: Sessions 3-4            Name That Portion                Investigation 4: Sessions 1-7            Between Never and Always                Investigation 2: Sessions 1-2            Building on Numbers You Know                Investigation 4: Sessions 1-2            Measurement Benchmarks                Investigation 1: Sessions 5-6            Patterns of Change                Investigation 1: Sessions 1-4            Containers and Cubes                Investigation 1: Sessions 1-2            Data: Kids, Cats, and Ads                Investigation 1: Sessions 1-4</p>
7.5.16	Express mathematical ideas and use them to define, compare, and solve problems orally and in writing [7.8]	<p>Grade 5 students express mathematical ideas and use them to define, compare, and solve problems orally and in writing throughout the course. The Dialogue Box is a feature that appears with many investigations and contains the text of discussions between teacher and students in which the teacher encourages the students to express and share mathematical ideas and solution strategies.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 5                Investigation 2: Sessions 1-4            Picturing Polygons                Investigation 2: Sessions 1-3            Name That Portion                Investigation 2: Session 6</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Between Never and Always Investigation 2: Sessions 1-2 Building on Numbers You Know Investigation 2: Sessions 1-2 Measurement Benchmarks Investigation 1: Session 4 Patterns of Change Investigation 1: Sessions 3-4 Containers and Cubes Investigation 3: Sessions 1-2 Data: Kids, Cats, and Ads Investigation 3: Session 4

### MATHEMATICAL REASONING

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.5.2	<b>First Trimester:</b> Justify answers and the steps taken to solve problems with and without manipulatives and physical models [8.1]	Grade 5 students justify answers and the steps taken to solve problems with and without manipulatives and physical models throughout the course. Students use a wide variety of manipulatives, including cubes, tiles, balances, pattern blocks, geoblocks, tetrominoes, and snap cubes to model numbers, operations, patterns, and problem situations. They also create graphs, charts, drawings, and tables to organize information needed to solve a problem. <b>Sample References:</b> Mathematical Thinking at Grade 5 Investigation 2: Session 5 Picturing Polygons Investigation 1: Session 3

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Name That Portion Ten-Minute Math: Seeing Numbers Between Never and Always Investigation 2: Session 3 Building on Numbers You Know Investigation 2: Sessions 5-6 Measurement Benchmarks Investigation 3: Session 2 Patterns of Change Investigation 3: Sessions 5-6 Containers and Cubes Investigation 2: Sessions 3-4 Data: Kids, Cats, and Ads Investigation 5: Sessions 3-5
8.5.4	Use patterns and relationships to analyze mathematical problems; draw logical conclusions about mathematical problems [8.2]	Grade 5 students use patterns and relationships to analyze mathematical situations and draw logical conclusions about mathematical problems throughout the course. <b>Sample References:</b> Mathematical Thinking at Grade 5 Investigation 1: Sessions 1-6 Picturing Polygons Investigation 1: Session 4 Name That Portion Investigation 3: Sessions 5-6 Between Never and Always Investigation 2: Session 3 Building on Numbers You Know Investigation 2: Sessions 5-6 Measurement Benchmarks Investigation 1: Session 4 Patterns of Change Investigation 2: Sessions 1-5 Containers and Cubes Investigation 1: Sessions 1-4 Data: Kids, Cats, and Ads Investigation 1: Sessions 2-3

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.5.6	Apply deductive and inductive reasoning to solve problems [8.4]	<p>Students apply a variety of types of reasoning to solve problems, including inductive, deductive, spatial, numerical, and logical reasoning, throughout the course. For example, they use inductive reasoning to extend patterns and deductive reasoning to sort polygons.</p> <p><b>References:</b>  Mathematical Thinking at Grade 5  Investigation 3: Session 5  Investigation 4: Sessions 1-6  Picturing Polygons  Investigation 2: Sessions 1-3  Building on Numbers You Know  Investigation 1: Session 1  Investigation 2: Sessions 5-6  Measurement Benchmarks  Investigation 2: Session 4  Investigation 3: Session 1  Ten-Minute Math: Guess My Number  Patterns of Change  Investigation 1: Sessions 1-4  Investigation 2: Sessions 1-5  Investigation 3: Sessions 1-7  Containers and Cubes  Investigation 1: Sessions 1-4  Investigation 4: Session 1  Ten-Minute Math: Guess My Number</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.5.9	Identify trends; understand underlying and functional relationships; generate or draw conclusions [[8.6]	Picturing Polygons Investigation 2: Sessions 4-5 Investigation 3: Sessions 1-2, 4-6 Between Never and Always Investigation 2: Sessions 1-3 Measurement Benchmarks Investigation 2: Sessions 7-8 Investigation 3: Sessions 1-2 Patterns of Change Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-5 Investigation 3: Sessions 1-7 Ten-Minute Math: Graph Stories Data: Kids, Cats, and Ads Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-3 Investigation 3: Sessions 1-4 Investigation 4: Sessions 1-3
8.5.11	Determine relevant, irrelevant, and/or sufficient information to solve mathematical problems 8.7]	Grade 5 students determine relevant, irrelevant, and/or sufficient information to solve mathematical problems throughout the course. Informational analysis is a fundamental component of the problem-solving process. <b>Sample References:</b> Mathematical Thinking at Grade 5 Investigation 1: Sessions 1-6 Picturing Polygons Investigation 3: Sessions 5-6 Name That Portion Investigation 4: Sessions 1-7 Between Never and Always Investigation 2: Sessions 1-5 Building on Numbers You Know Investigation 5: Sessions 1-7 Measurement Benchmarks Investigation 1: Sessions 1-8 Patterns of Change Investigation 3: Sessions 1-7

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Containers and Cubes Investigation 3: Sessions 1-4 Data: Kids, Cats, and Ads Investigation 5: Sessions 1-5
8.5.2	<p><b>Second Trimester:</b></p> <p>Justify answers and the steps taken to solve problems with and without manipulatives and physical models [8.1]</p>	<p>Grade 5 students justify answers and the steps taken to solve problems with and without manipulatives and physical models throughout the course. Students use a wide variety of manipulatives, including cubes, tiles, balances, pattern blocks, geoblocks, tetrominoes, and snap cubes to model numbers, operations, patterns, and problem situations. They also create graphs, charts, drawings, and tables to organize information needed to solve a problem.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 5 Investigation 2: Session 5 Picturing Polygons Investigation 1: Session 3 Name That Portion Ten-Minute Math: Seeing Numbers Between Never and Always Investigation 2: Session 3 Building on Numbers You Know Investigation 2: Sessions 5-6 Measurement Benchmarks Investigation 3: Session 2 Patterns of Change Investigation 3: Sessions 5-6 Containers and Cubes Investigation 2: Sessions 3-4 Data: Kids, Cats, and Ads Investigation 5: Sessions 3-5</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.5.4	Use patterns and relationships to analyze mathematical problems; draw logical conclusions about mathematical problems [8.2]	<p>Grade 5 students use patterns and relationships to analyze mathematical situations and draw logical conclusions about mathematical problems throughout the course.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 5                Investigation 1: Sessions 1-6            Picturing Polygons                Investigation 1: Session 4            Name That Portion                Investigation 3: Sessions 5-6            Between Never and Always                Investigation 2: Session 3            Building on Numbers You Know                Investigation 2: Sessions 5-6            Measurement Benchmarks                Investigation 1: Session 4            Patterns of Change                Investigation 2: Sessions 1-5            Containers and Cubes                Investigation 1: Sessions 1-4            Data: Kids, Cats, and Ads                Investigation 1: Sessions 2-3</p>
8.5.6	Apply deductive and inductive reasoning to solve problems [8.4]	<p>Students apply a variety of types of reasoning to solve problems, including inductive, deductive, spatial, numerical, and logical reasoning, throughout the course. For example, they use inductive reasoning to extend patterns and deductive reasoning to sort polygons.</p> <p><b>References:</b>            Mathematical Thinking at Grade 5                Investigation 3: Session 5                Investigation 4: Sessions 1-6</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Picturing Polygons Investigation 2: Sessions 1-3 Building on Numbers You Know Investigation 1: Session 1 Investigation 2: Sessions 5-6 Measurement Benchmarks Investigation 2: Session 4 Investigation 3: Session 1 Ten-Minute Math: Guess My Number Patterns of Change Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-5 Investigation 3: Sessions 1-7 Containers and Cubes Investigation 1: Sessions 1-4 Investigation 4: Session 1 Ten-Minute Math: Guess My Number
8.5.9	Identify trends; understand underlying and functional relationships; generate or draw conclusions [[8.6]	Picturing Polygons Investigation 2: Sessions 4-5 Investigation 3: Sessions 1-2, 4-6 Between Never and Always Investigation 2: Sessions 1-3 Measurement Benchmarks Investigation 2: Sessions 7-8 Investigation 3: Sessions 1-2 Patterns of Change Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-5 Investigation 3: Sessions 1-7 Ten-Minute Math: Graph Stories Data: Kids, Cats, and Ads Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-3 Investigation 3: Sessions 1-4 Investigation 4: Sessions 1-3



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.5.11	Determine relevant, irrelevant, and/or sufficient information to solve mathematical problems 8.7]	<p>Grade 5 students determine relevant, irrelevant, and/or sufficient information to solve mathematical problems throughout the course. Informational analysis is a fundamental component of the problem-solving process.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 5  Investigation 1: Sessions 1-6  Picturing Polygons  Investigation 3: Sessions 5-6  Name That Portion  Investigation 4: Sessions 1-7  Between Never and Always  Investigation 2: Sessions 1-5  Building on Numbers You Know  Investigation 5: Sessions 1-7  Measurement Benchmarks  Investigation 1: Sessions 1-8  Patterns of Change  Investigation 3: Sessions 1-7  Containers and Cubes  Investigation 3: Sessions 1-4  Data: Kids, Cats, and Ads  Investigation 5: Sessions 1-5</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.5.2	<p><b>Third Trimester:</b></p> <p>Justify answers and the steps taken to solve problems with and without manipulatives and physical models [8.1]</p>	<p>Grade 5 students justify answers and the steps taken to solve problems with and without manipulatives and physical models throughout the course. Students use a wide variety of manipulatives, including cubes, tiles, balances, pattern blocks, geoblocks, tetrominoes, and snap cubes to model numbers, operations, patterns, and problem situations. They also create graphs, charts, drawings, and tables to organize information needed to solve a problem.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 5  Investigation 2: Session 5  Picturing Polygons  Investigation 1: Session 3  Name That Portion  Ten-Minute Math: Seeing Numbers  Between Never and Always  Investigation 2: Session 3  Building on Numbers You Know  Investigation 2: Sessions 5-6  Measurement Benchmarks  Investigation 3: Session 2  Patterns of Change  Investigation 3: Sessions 5-6  Containers and Cubes  Investigation 2: Sessions 3-4  Data: Kids, Cats, and Ads  Investigation 5: Sessions 3-5</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.5.4	Use patterns and relationships to analyze mathematical problems; draw logical conclusions about mathematical problems [8.2]	<p>Grade 5 students use patterns and relationships to analyze mathematical situations and draw logical conclusions about mathematical problems throughout the course.</p> <p><b>Sample References:</b>  Mathematical Thinking at Grade 5  Investigation 1: Sessions 1-6  Picturing Polygons  Investigation 1: Session 4  Name That Portion  Investigation 3: Sessions 5-6  Between Never and Always  Investigation 2: Session 3  Building on Numbers You Know  Investigation 2: Sessions 5-6  Measurement Benchmarks  Investigation 1: Session 4  Patterns of Change  Investigation 2: Sessions 1-5  Containers and Cubes  Investigation 1: Sessions 1-4  Data: Kids, Cats, and Ads  Investigation 1: Sessions 2-3</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.5.6	Apply deductive and inductive reasoning to solve problems [8.4]	<p>Students apply a variety of types of reasoning to solve problems, including inductive, deductive, spatial, numerical, and logical reasoning, throughout the course. For example, they use inductive reasoning to extend patterns and deductive reasoning to sort polygons.</p> <p><b>References:</b></p> <p>Mathematical Thinking at Grade 5  Investigation 3: Session 5  Investigation 4: Sessions 1-6</p> <p>Picturing Polygons  Investigation 2: Sessions 1-3</p> <p>Building on Numbers You Know  Investigation 1: Session 1  Investigation 2: Sessions 5-6</p> <p>Measurement Benchmarks  Investigation 2: Session 4  Investigation 3: Session 1</p> <p>Ten-Minute Math: Guess My Number</p> <p>Patterns of Change  Investigation 1: Sessions 1-4  Investigation 2: Sessions 1-5  Investigation 3: Sessions 1-7</p> <p>Containers and Cubes  Investigation 1: Sessions 1-4  Investigation 4: Session 1</p> <p>Ten-Minute Math: Guess My Number</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
8.5.9	Identify trends; understand underlying and functional relationships; generate or draw conclusions [[8.6]	Picturing Polygons Investigation 2: Sessions 4-5 Investigation 3: Sessions 1-2, 4-6 Between Never and Always Investigation 2: Sessions 1-3 Measurement Benchmarks Investigation 2: Sessions 7-8 Investigation 3: Sessions 1-2 Patterns of Change Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-5 Investigation 3: Sessions 1-7 Ten-Minute Math: Graph Stories Data: Kids, Cats, and Ads Investigation 1: Sessions 1-4 Investigation 2: Sessions 1-3 Investigation 3: Sessions 1-4 Investigation 4: Sessions 1-3
8.5.11	Determine relevant, irrelevant, and/or sufficient information to solve mathematical problems 8.7]	Grade 5 students determine relevant, irrelevant, and/or sufficient information to solve mathematical problems throughout the course. Informational analysis is a fundamental component of the problem-solving process. <b>Sample References:</b> Mathematical Thinking at Grade 5 Investigation 1: Sessions 1-6 Picturing Polygons Investigation 3: Sessions 5-6 Between Never and Always Investigation 2: Sessions 1-5 Building on Numbers You Know Investigation 5: Sessions 1-7 Patterns of Change Investigation 3: Sessions 1-7 Containers and Cubes Investigation 3: Sessions 1-4 Data: Kids, Cats, and Ads Investigation 5: Sessions 1-5

## MATHEMATICAL CONNECTIONS

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
9.5.3	<p><b>First Trimester:</b></p> <p>Use models to explain the relationship of concepts to procedures [9.3]</p>	<p>Grade 5 students use models to explain the relationship of concepts to procedures throughout the course. Students choose between and among concrete materials and symbols, tables and graphs, drawings and diagrams, and computer models.</p> <p><b>Sample References:</b></p> <p>Mathematical Thinking at Grade 5            Investigation 4: Sessions 5-6            Picturing Polygons            Investigation 3: Sessions 5-6            Name That Portion            Investigation 4: Session 2            Between Never and Always            Investigation 1: Sessions 3-4            Building on Numbers You Know            Investigation 4: Session 2            Measurement Benchmarks            Investigation 3: Session 3            Patterns of Change            Investigation 3: Session 3            Containers and Cubes            Investigation 4: Sessions 7-9            Data: Kids, Cats, and Ads            Investigation 2: Session 3</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
9.5.8	Identify, explain, and use mathematics in everyday life [9.8]	<p><b>Sample References:</b>            Mathematical Thinking at Grade 5                Investigation 1: Sessions 1-3            Picturing Polygons                Investigation 3: Sessions 5-6            Name That Portion                Investigation 4: Session 2            Between Never and Always                Investigation 1: Sessions 1-2            Building on Numbers You Know                Investigation 2: Session 7            Measurement Benchmarks                Investigation 1: Sessions 7-8            Patterns of Change                Investigation 3: Session 1            Containers and Cubes                Investigation 3: Session 4            Data: Kids, Cats, and Ads                Investigation 2: Session 3</p>
9.5.3	<p><b>Second Trimester:</b>            Use models to explain the relationship of concepts to procedures [9.3]</p>	<p>Grade 5 students use models to explain the relationship of concepts to procedures throughout the course. Students choose between and among concrete materials and symbols, tables and graphs, drawings and diagrams, and computer models.</p> <p><b>Sample References:</b>            Mathematical Thinking at Grade 5                Investigation 4: Sessions 5-6            Picturing Polygons                Investigation 3: Sessions 5-6            Name That Portion                Investigation 4: Session 2            Between Never and Always                Investigation 1: Sessions 3-4            Building on Numbers You Know                Investigation 4: Session 2</p>

Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Measurement Benchmarks Investigation 3: Session 3 Patterns of Change Investigation 3: Session 3 Containers and Cubes Investigation 4: Sessions 7-9 Data: Kids, Cats, and Ads Investigation 2: Session 3
9.5.8	Identify, explain, and use mathematics in everyday life [9.8]	<b>Sample References:</b> Mathematical Thinking at Grade 5 Investigation 1: Sessions 1-3 Picturing Polygons Investigation 3: Sessions 5-6 Name That Portion Investigation 4: Session 2 Between Never and Always Investigation 1: Sessions 1-2 Building on Numbers You Know Investigation 2: Session 7 Measurement Benchmarks Investigation 1: Sessions 7-8 Patterns of Change Investigation 3: Session 1 Containers and Cubes Investigation 3: Session 4 Data: Kids, Cats, and Ads Investigation 2: Session 3
9.5.3	<b>Third Trimester:</b> Use models to explain the relationship of concepts to procedures [9.3]	Grade 5 students use models to explain the relationship of concepts to procedures throughout the course. Students choose between and among concrete materials and symbols, tables and graphs, drawings and diagrams, and computer models. <b>Sample References:</b> Mathematical Thinking at Grade 5 Investigation 4: Sessions 5-6



Nevada Standard	Clark County School District Guide for Benchmarks	Investigations in Number, Data, and Space
	(continued)	Picturing Polygons Investigation 3: Sessions 5-6 Name That Portion Investigation 4: Session 2 Between Never and Always Investigation 1: Sessions 3-4 Building on Numbers You Know Investigation 4: Session 2 Measurement Benchmarks Investigation 3: Session 3 Patterns of Change Investigation 3: Session 3 Containers and Cubes Investigation 4: Sessions 7-9 Data: Kids, Cats, and Ads Investigation 2: Session 3
9.5.8	Identify, explain, and use mathematics in everyday life [9.8]	<b>Sample References:</b> Mathematical Thinking at Grade 5 Investigation 1: Sessions 1-3 Picturing Polygons Investigation 3: Sessions 5-6 Name That Portion Investigation 4: Session 2 Between Never and Always Investigation 1: Sessions 1-2 Building on Numbers You Know Investigation 2: Session 7 Measurement Benchmarks Investigation 1: Sessions 7-8 Patterns of Change Investigation 3: Session 1 Containers and Cubes Investigation 3: Session 4 Data: Kids, Cats, and Ads Investigation 2: Session 3