Grade: Kindergarten **Subject:** Mathematics	**Unit 2: Explore Five-Groups**
Big Idea/Rationale	• This unit reviews and builds on children's knowledge of numbers 1 through 10. By using the number 5 as a building block, children are helped to understand numbers 6-10. The enacting of addition and subtraction stories in familiar situations strengthens the connections to children's lives. Children also work with partners of numbers, look for realtionships among numbers 1 through 10, and begin building understanding of teen numbers by showing them with their fingers as a ten and extra ones. • Story Problems • Patterns • More Numbers 1 Through 10 • Introduction to Coins (Penny)
Enduring Understanding	Students will understand that: • Counting is cumulative no matter which order the objects are counted. • There is a unique symbol that goes with each number word. • There is more than one way to show and write a number. • In a pair of numbers, the number that shows more is greater and the number that shows fewer is less. • You can use numbers as benchmarks for comparison. • Some patterns are made up of units that repeat. • Patterns are alike and different depending on how they repeat. • In a growing pattern there is a predictable and countable change from one art to the next. • Same sets of objects can be used to create different patterns. • Joining groups or part of a whole is one way to interpret addition. • Joining groups and using the + and = signs can be used to show the parts of a whole. • Pictures and real life objects can be used with or without formal mathematical symbols to solve addition problems and relate a sum. • Separating or taking parts from a whole are ways of interpreting subtraction. • Comparing quantities for the purpose of stating more or less quantity is another way of demonstrating subtraction. • Subtraction number sentences can be relayed using the – and = symbols.

	• The attributes of a penny and its value.
Essential Questions	• How are numbers important and how do they relate to everyday life situations? • How do we use numbers when relating them to sets of objects? • How can you show a whole group of objects in different ways? • How do you know when a number is greater than another and what vocabulary do I use to convey this? • How can I use numbers as benchmarks for the purpose of comparing and finding another number that is 1 or 2 more or fewer? • What is a pattern? • How do we find patterns? • What can patterns reveal? • When moving two groups of objects together or two parts of a whole, how does it help you know how many altogether? • What strategies can be used for finding sum? • Can I use more than pencil and paper to relate an addition problem? • How does moving an object or objects to the side of a group, help me know how many objects are left? • Can I use more than pencil and paper to relate a subtraction problem? • Which one is the penny?
Content (Subject Matter)	• Find numbers 1-10 • Relate Objects and Numbers 6-10 • Family Math Stories • Coin Values • Numbers 6-10 • More Family Math Stories • Introduction to Repeating Patterns • Make Repeating Patterns • Addition and Subtraction Stories: Playground Scenario • More Coin Values and Numbers 6-10 • 2- and 3-Dimensional Shapes: Rectangles and Boxes • Practice with 5-Groups: Investigate Shapes in Our World • Investigate Shapes in Our World • Explore Number Patterns • More Repeating Patterns • Relate Shapes and Numbers 6-10 • Addition and Subtraction Stories: Garden Scenario • Numbers 1 Through 10: the +1 Pattern • Find and Make New Patterns • More Numbers 1 Through 10: the +1 Pattern • Addition and Subtraction Stories: Family Experience

	• Numbers 1 Through 10: the -1 Pattern • Number Writing Practice • More Numbers 1 Through 10: the -1 Pattern • Shapes in a Train Scene
Standards	• **K.CC.A.1:** Count to 100 by ones and by tens. • **K.CC.A.2:** Count forward beginning from a given number within the known sequence (instead of having to begin at 1). • **K.CC.A.3:** Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). • **K.CC.B.4.a:** Understand the relationship between numbers and quantities; connect counting to cardinality. • **K.CC.B.4.c:** Understand that each successive number name refers to a quantity that is one larger. • **K.CC.B.5:** Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects. • **K.CC.C.6:** Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. • **K.OA.A.1:** Represent addition and subtraction with objects, fingers, mental images, drawings[1], sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. • **K.OA.A.2:** Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. • **K.OA.A.5:** Fluently add and subtract within 5. • **K.G.A.1:** Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*. • **K.G.A.2:** Correctly name shapes regardless of their orientations or overall size. • **K.G.A.3:** Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid"). • **K.G.B.4:** Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length). • **K.G.B.5:** Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.

	• **K.G.B.6:** Compose simple shapes to form larger shapes. *For example, "Can you join these two triangles with full sides touching to make a rectangle?"* • **Mathematical Practices**
Materials and Resources	• Kindergarten Math Expressions, Math Journals, manipulatives, Math themed literature, IXL Mathematics