URBANDALE
COMMUNITY SCHOOL DISTRICT

Course Title: **Kindergarten Math**

Description: Kindergarten math systematically integrates instruction in mathematical content with instruction in the mathematical practices. Throughout the program, emphasis is placed on:

- Building from and connecting with children's informal, everyday experiences with mathematics
- Problem solving in everyday situations and mathematical contexts
- An instruction design that revisits topics regularly to ensure depth of knowledge and long term learning (such as counting, number sense, geometry, measurement)
- Distributed practice through routines, games, and other activities
- Teaching that supports "productive struggle" and maintains high cognitive demand
- Interactive lessons and activities that engage all children and make mathematics fun

Number and Quantity

Reporting Topic	Grade Level Standards	Competency Statement
Number Sense	• Count to 100 by ones and tens. (K.CC.A.1) • Count forward beginning from a given number within the known sequence (K.CC.A.2) • Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (K.CC.A.3) • Understand the relationship between numbers and quantities; connect counting to cardinality (K.CC.B.4) • 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.B.5) • Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group (K.CC.C.6) • Compare two numbers between 1 and 10 presented as written numerals (K.CC.C.7)	Students will: • Understand the relationship between number names and their quantities, including counting to 20.
	• Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g. by using objects or drawings, and record each composition or decomposition by a drawing or equation; understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones (K.NBT.A.1)	Students will: • Build and represent a number (11 - 20) using a drawing, objects, or

Place Value	• Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings to represent the problem (K.OA.A.3) • For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation (K.OA.A.4)	number model.

Operations and Algebra

Reporting Topic	Grade Level Standards	Competency Statement
Addition	• Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g. claps), acting out situations, verbal explanations, expressions, or equations (K.OA.A.1) • 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.2) • Fluently add and subtract within five (K.OA.A.5)	Students will: • Use objects, drawings, or number models to accurately solve addition word problems within ten.
Subtraction	• Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g. claps), acting out situations, verbal explanations, expressions, or equations (K.OA.A.1) • 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.2) • Fluently add and subtract within five (K.OA.A.5)	Students will: • Use objects, drawings, or number models to accurately solve subtraction word problems within ten.

Geometry

Reporting Topic	Grade Level Standards	Competency Statement
	• Analyze and compare a variety of 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.4) • 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,	Students will: • Correctly create and name simple shapes

Naming and Creating Shapes	and next to. (K.G.A.1) • Correctly name shapes regardless of their orientations or overall size (K.G.A.2) • Identify shapes as two dimensional (lying on a plane, "flat") or three dimensional ("solid") (K.G.A.3) • Model shapes in the world by building shapes from components (e.g. sticks and clay balls) (K.G.B.5) • Compose simple shapes to form larger shapes. *For example, joining two triangles to make a rectangle.* (K.G.B.6)	used to compose complex shapes.
Measurement, Data, Statistics, and Probability		
Reporting Topics	**Grade Level Standards**	
Measurement	• Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object (K.MD.A.1) • Directly compare two objects with a measurable attribute in common, to see which object has "more of" or "less of" the attribute, and describe the difference (K.MD.A.2)	Students will: • Compare two objects to determine which has "more of" or "less of" a specific attribute
Represent and Interpret Data	• Classify objects into given categories; count the numbers of objects in each category and sort the categories by count (K.MD.B.3)	Students will: • Count objects as students put them into specific categories (i.e. size, color, etc.)