***Kannapolis City Schools 2010-2011 Mathematics***

***Investigations Quarterly Guide – First Grade***

**Number and Operations**

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| **Essential Standard** | | **Clarifying Objectives** | | **U= Unit**  **CR= Classroom Routines** | | | |
|  | | | | **1st** | **2nd** | **3rd** | **4th** |
| **1.N.1** | **Represent the whole numbers from 0 through 100 by counting, reading, writing and the use of physical models.** | 1.N.1.1 | Understand the sequential order of the counting numbers and their relative magnitudes. | U-1  CR-1,2 | U-3,4  CR- 3,4 | CR-5,6,7 | U-8  CR-8,9 |
| 1.N.1.2 | Use a range of numbers (1-10, 11-20, 21-30, etc.) to estimate the quantity of a given set. | U-1  CR-2 | U-3  CR-3,4 | CR-5,6,7 | U-8  CR-8,9 |
| 1.N.1.3 | Understand that counting by 2s, 5s and 10s is counting groups of items by that amount. | U-1 | U-3  CR-3,4 | CR-5,6,7 | U-8  CR-8,9 |
| 1.N.1.4 | Recognize patterns in written numerals and use those patterns to determine the order of numbers including the number before and after, 1 more and 1 less and 2 more and 2 less. | U-1 | U-3  CR-3,4 | U-7  CR-5,6,7 | U-8  CR-8,9 |
| 1.N.1.5 | Understand that the order of the digits determines the given number and use this understanding to compare sets and numbers. | U-1 | U-3  CR-3,4 | CR-5,6,7 | U-8  CR-8,9 |
| 1.N.1.6 | Illustrate whole numbers to 30 in groups of tens and ones using objects, pictures and numbers. | U-1 | U-3  CR-3,4 | CR-5,6,7 | U-8  CR-8,9 |
| **1.N.2** | **Use strategies to compose and decompose numbers 0-100.** | 1.N.2.1 | Use part-part-whole relationships (including 2 or more parts), benchmark numbers 5 and 10, doubles and near doubles to compose and decompose numbers. | U-1 | U-3  CR-3 | U-6 |  |
| 1.N.2.2 | Understand the concept of ten–and-some-more with numbers 11-20. | U-1 |  | U-6 |  |
| 1.N.2.3 | Understand 10 more and 10 less from any given number to 100. | U-1 |  | U-6 |  |
| **1.N.3** | **Use efficient strategies to solve a variety of story problems and generate a justification for the reasonableness of the answer.** | 1.N.3.1 | Use fluent recall of addition facts (sums to 10) and the related subtraction facts to solve problems. |  | U-3  CR-3 | U-6  CR-6 | U-8 |
| 1.N.3.2 | Use strategies to solve single and multi-step addition and subtraction story problems to 30. | U-1  CR-1,2 | U-3 | U-6  CR 6,7 | U-8  CR-8,9 |
| 1.N.3.3 | Use strategies to solve single-step addition and subtraction story problems to 100. |  | U-3 | U-6 | U-8 |
| **1.N.4** | **Understand sharing fairly (equipartitioning) with collections of discrete items and single continuous wholes.** | 1.N.4.1 | Understand that a region or set must be divided into equal parts of the whole and when reassembled recreates the whole. |  |  | CR-6 |  |
| 1.N.4.2 | Understand the concept of “left-over” (remainder). |  |  | CR-6 |  |
| 1.N.4.3 | Understand that even numbers are sets that can be shared fairly between two people and odd sets cannot. |  |  | CR-6 |  |

**Algebra**

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| **Essential Standard** | | **Clarifying Objectives** | |  | | | |
|  | | | | **1st** | **2nd** | **3rd** | **4th** |
| **1.A.1** | **Use relationships between addition and subtraction to solve problems.** | 1.A.1.1 | Use models to demonstrate addition properties (commutative, associative and identity). | U-1 | U-3  CR-3 |  |  |
| 1.A.1.2 | Use models to demonstrate the inverse relationship between addition and subtraction. |  | U-3 |  | CR-9 |
| **1.A.2** | **Apply the concept of equality.** | 1.A.2.1 | Use the equal sign to show the relationship between one side of the equation and the other. |  | U-3 | U-6 | U-8 |
| 1.A.2.2 | Interpret simple number sentences as models and models as number sentences in order to solve. |  | U-3 | U-6,7  CR-6,7 | U-8  CR- 8,9 |
| **1.A.3** | **Analyze repeating patterns.** | 1.A.3.1 | Analyze patterns to identify the unit, correct errors and extend the patterns. |  |  | U-7 |  |
| 1.A.3.2 | Translate patterns into symbolic representations using actions, words and models. |  |  | U-7 |  |

**Geometry**

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| **Essential Standard** | | **Clarifying Objectives** | |  | | | |
|  | | | | **1st** | **2nd** | **3rd** | **4th** |
| **1.G.1** | **Classify two-dimensional figures (polygons) as parallelogram, rhombus, trapezoid and hexagon and three-dimensional figures (polyhedra) as prism and pyramid according to geometric attributes.** | 1.G.1.1 | Describe the attributes of the figures, such as: number of faces or edges, equal sizes of sides and numbers of angles. | U-2  CR-2 |  |  | U-9  CR-9 |
| 1.G.1.2 | Use the attributes of figures to recognize different variations of figures. | U-2 |  |  | U-9  CR-9 |
| **1.G.2** | **Compare geometric figures in terms of their perspectives and orientations.** | 1.G.2.1 | Summarize relationships of objects using proximity, position, perspective, orientation and navigation. | U-2 |  |  | U-9 |
| 1.G.2.2 | Compare different perspectives and orientations by composing and decomposing geometric figures. | U-1,2 | U-3 |  | U-9 |

**Measurement**

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| **Essential Standard** | | **Clarifying Objectives** | |  | | | |
|  | | | | **1st** | **2nd** | **3rd** | **4th** |
| **1.M.1** | **Use nonstandard units to estimate and measure length or weight\* of objects.**  **\*More properly mass, but most commonly understood as weight at this grade band.** | 1.M.1.1 | Compare objects in terms of appropriate non-standard units of measurement. |  |  | U-5 |  |
| 1.M.1.2 | Use comparative vocabulary to describe the relationship among three to five objects with respect to length (longer, shorter), weight (heavier, lighter) or duration. |  |  | U-5 | CR-8 |
| **1.M.2** | **Use the names of the days of the weeks and the months of the year to describe special activities and events.** | 1.M.2.1 | Remember in order the names of the days of the week and months of the year. | CR-1,2 | CR-3,4 | CR-5,6,7 | CR-8,9 |
| 1.M.2.2 | Recognize the difference in the amount of time between a day, week and month. | CR- 1,2 | CR-3,4 | CR- 5,6,7 | CR- 8,9 |

**Statistics and Probability**

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|  | | | | **1st** | **2nd** | **3rd** | **4th** |
| **1.S.1** | **Infer the rule for classifying objects on the basis of two attributes.** | 1.S.1.1 | Explain how a collection of objects with various attributes can be classified or sorted in different ways. |  | U-4 |  |  |
| **1.S.2** | **Use appropriate methods to collect, display, analyze and interpret statistical data in response to specific questions.** | 1.S.2.1 | Represent data collected using picture graphs, line plots, lists and tallies to capture and represent categorical and numerical data. | CR-1,2 | U-4  CR-3,4 | CR-5,6,7 | CR-8,9 |