



# Grade 1 - Unit A - Numbers All Around Us

## Unit Focus

To begin the year, students will establish their rights and responsibilities within the math workshop and Number Corner environment. Students use Work Places as regular opportunities to socially engage in mathematical learning while sharing strategies with fellow students. Small guided math groups are facilitated during this time to help students consolidate or extend their learning.

Unit A is designed to help students develop a sense of numbers and their relationships to one another through looking at several key counting and number concepts.

- Organizing and counting objects moving to counting forward and backward
- Grouping and counting in 2s, 5s, and 10s
- Subitizing is developed through the use of models such as number racks, ten frames, tally marks, graphs, and number lines

Subitizing is a key step in developing strategies to add and subtract. Students will begin to develop part-part- whole reasoning which is useful in problem contexts involving combining and separating numbers. Throughout the unit, students analyze mathematical problems and situations by deconstructing questions or problems to identify relevant information and appropriate strategies for solving the problem. By the end of the unit, students understand how to use, visualize and create models such as number racks and ten frames to solve a novel problem that they have analyzed in order to find a solution pathway.

## Stage 1: Desired Results - Key Understandings

| Standard(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Transfer                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Standards</b> <ul style="list-style-type: none"><li>• Common Core<ul style="list-style-type: none"><li>○ <i>Mathematics: 1</i></li></ul></li><li>▪ Understand and apply properties of operations and the relationship between addition and subtraction.</li><li>▪ Understand subtraction as an unknown-addend problem. For example, subtract 10 - 8 by finding the number that makes 10 when added to 8.<br/>(CCSS.MATH.CONTENT.1.OA.B.4)</li><li>▪ Add and subtract within 20.</li><li>▪ Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).<br/>(CCSS.MATH.CONTENT.1.OA.C.5)</li><li>▪ Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., <math>8 + 6 = 8 + 2 + 4 = 10 + 4 = 14</math>); decomposing a number leading to a ten (e.g., <math>13 - 4 = 13 - 3 - 1 = 10 - 1 = 9</math>); using the relationship between addition and subtraction (e.g., knowing that <math>8 + 4 = 12</math>, one knows <math>12 - 8 = 4</math>); and creating equivalent but easier or known</li></ul> | <i>Students will be able to independently use their learning to...</i><br><b>T1</b> Apply models to solve problems.<br><b>T2</b> Identify and generalize patterns and structure in numbers, expressions, data and objects.                  |                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Meaning                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Understanding(s)                                                                                                                                                                                                                            | Essential Question(s)                                                                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <i>Students will understand that...</i><br><b>U1</b> Mathematicians create or use models to generalize, represent, and solve problems.<br><b>U2</b> Mathematicians see patterns to make generalizations about structures and relationships. | <i>Students will keep considering...</i><br><b>Q1</b> What model best represents this problem?<br><b>Q2</b> What patterns are present?<br><b>Q3</b> How would seeing numbers inside of other numbers help me to understand them? |

## Stage 1: Desired Results - Key Understandings

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>sums (e.g., adding <math>6 + 7</math> by creating the known equivalent <math>6 + 6 + 1 = 12 + 1 = 13</math>). (CCSS.MATH.CONTENT.1.OA.C.6)</p> <ul style="list-style-type: none"> <li>Work with addition and subtraction equations.</li> <li>Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations <math>8 + ? = 11</math>, <math>5 = \_ - 3</math>, <math>6 + 6 = \_</math>. (CCSS.MATH.CONTENT.1.OA.D.8)</li> <li>Number &amp; Operations in Base Ten</li> <li>Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (CCSS.MATH.CONTENT.1.NBT.A.1)</li> <li>Represent and interpret data.</li> <li>Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another. (CCSS.MATH.CONTENT.1.MD.C.4)</li> <li>Mathematical Practices</li> <li>Model with mathematics. (CCSS.MATH.MP.4)</li> <li>Look for and make use of structure. (CCSS.MATH.MP.7)</li> </ul> <p><b>Madison Public Schools Profile of a Graduate</b></p> <p>Analyzing: Examining information/data/evidence from multiple sources to identify possible underlying assumptions, patterns, and relationships in order to make inferences. (POG.1.2)</p> | Acquisition of Knowledge and Skill                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Knowledge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Skill(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p><i>Students will know...</i></p> <p><b>K1</b> Strategies to solve combinations to 5 and 10 such as counting on, doubles and compensation;</p> <p><b>K2</b> A variety of equations can be written to describe a number relationship</p> <p><b>K3</b> The part is distinct from the whole, and at the same time won't lose sight of the whole as it relates to its component parts.</p> <p><b>K4</b> Vocabulary: less than, more than, tally, pattern, equation, equal, addition, subtraction, ten-frame, length, sum, total NC-week, year, estimate, fewer, greater, graph, nickel, penny, column, row, decade, digit, number line, before, after</p> <p><b>K5</b> Strategies to solve result unknown word problems</p> <p><b>K6</b> Understand count back strategies for solving subtraction problems</p> | <p><i>Students will be skilled at...</i></p> <p><b>S1</b> Seeing a combination of a number and writing it as an equation</p> <p><b>S2</b> Using models such as the ten frame and number rack to help visualize numbers, relationships, and combinations</p> <p><b>S3</b> Using part-part whole relations in problem contexts that involve combining or separating numbers</p> <p><b>S4</b> Counting forward and backward by 1s, 2s, 5s, and 10s</p> <p><b>S5</b> Recognizing and reproducing quantities without having to count individually</p> <p><b>S6</b> Solving one-step story problems</p> |