Dear Families,

Welcome to 3rd Grade. This year, we will be using resources from the Illinois State Board of Education Model Mathematics Curriculum. Here are the key topics in mathematics this year:

1. Critical Area #1: Students develop an understanding of **the meanings of multiplications and division** of whole numbers through activities and problems involving equal-sized groups, arrays, and area models; multiplication is finding an unknown product, and division is finding an unknown factor in these situations. For equal-sized group situations, division can require finding the unknown number of groups or the unknown group size. Students use properties of operations to calculate products of whole numbers, using increasingly sophisticated strategies based on these properties to solve multiplication and division problems involving single-digit factors. By comparing a variety of solution strategies, students learn the relationship between multiplication and division.
2. Critical Area #2: Students **develop an understanding of fractions, beginning with unit fractions**. Students view fractions in general as being built out of unit fractions, and they use fractions along with visual fraction models to represent parts of a whole. Students understand that the size of a fractional part is relative to the size of the whole. For example, ½ of the paint in a small bucket could be less paint than 1/3 of the paint in a larger bucket, but 1/3 of a ribbon is longer than 1/5 of the same ribbon because when the ribbon is divided into 3 equal parts, the parts are longer than when the ribbon is divided into 5 equal parts. Students are able to use fractions to represent numbers equal to, less than, and greater than one. They solve problems that involve comparing fractions by using visual fraction models and strategies based on noticing equal numerators or denominators.
3. Critical Area #3: Students **recognize area as an attribute of two-dimensional regions**. They measure the area of a shape by finding the total number of same-size units of area required to cover the shape without gaps or overlaps, a square with sizes of unit length being the standard unit for measuring area. Students understand that rectangular arrays can be decomposed into identical rows or into identical columns. By decomposing rectangles into rectangular arrays of squares, students connect area to multiplication, and justify using multiplication to determine the area of a rectangle.
4. Critical Area #4: Students **describe, analyze, and compare properties of two-dimensional shapes**. They compare and classify shapes by their sides and angles, and connect these with definitions of shapes. Students also relate their fraction work to geometry by expressing the area of part of a shape as a unit fraction of the whole.

Our curriculum consists of 7 units that will be taught in the following sequence:

1) **Addition and Subtraction Applications:** In the first unit, students in grade 3 apply their addition and subtraction experience from grade 2 to graphs (bar graph and pictograph), elapsed time and perimeter situations.
2) **Introduction to Area:** The second unit introduces students to the concept of square units. Students will use the square units to measure area by counting and repeated addition, which lays a solid foundation for multiplication and division in the next unit.
3) **Multiplication and Division Concepts:** In our third unit, students use their experience with area to understand the operations of multiplication and division within 100. They will interpret multiplication and division models and equations and begin to internalize the facts. By the end of the school year, students will know and apply all of their basic multiplication facts.
4) **Multiplication and Division Applications:** Students will continue to use their multiplication and division concepts within 100 to represent and solve problems in a variety of contexts. This will include multiplying and adding to solve composite area problems (like the area of an L shaped room), or solving other 2-step word problems. They will use this understanding to multiply some 2-digit numbers by 1-digit numbers within 100 (ex. 21 x 3 can be solved by multiplying 20 x 3 and 1 x 3 and then adding the two products).
5) **Fractions:** In unit 5, students are introduced to fraction notation and develop understanding of equivalent fractions using number line diagrams and other visual models. They learn that the numerator represents the number of portions and the denominator represents the size of the portions, and compare fractions with either the same numerator or same denominator.
6) **Geometry:** Unit 6 involves an in-depth study of Quadrilaterals, which lays a foundation for understanding the polygon hierarchy in Grade 5.

7) **Addition and Subtraction within 1000:** The final unit of the 3rd grade year involves fluent rounding and addition and subtraction of quantities within 1000. This will prepare students to begin fourth grade with a solid understanding of place value within 1000.

Our sequence of units has been carefully planned to prepare our students for success on the new PARCC assessments. These assessments have replaced the ISAT as the Illinois State Assessment, and will be given in March and in May of this school year. Students will practice many skills and concepts by revisiting them in daily routines and centers throughout the school year. We are looking forward to a wonderful experience in 3rd Grade.