Grade 2 Numeracy Blueprint

	Mathematical Process Standards	Place Value	Addition and Subtraction	Measuring Length	Shapes, Solids, and Early Fraction Concepts
By the end of the year, the student will be able to:	• Apply mathematics to problems arising in everyday life, society, and the workplace • Use a problem-solving model • Select tools, technology, and techniques to solve problems • Communicate mathematical ideas, reasoning, and their implications • Create and use representations to organize, record, and communicate mathematical ideas • Analyze mathematical relationships to connect and communicate mathematical ideas • Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication	• Use standard, word, and expanded forms to represent numbers up to 1,200 • Use place value to compare and order whole numbers up to 1,200 using comparative language, numbers, and symbols (<,>, or =) • Use concrete and pictorial models to compose and decompose numbers up to 1,200 in more than one way as a sum of so many thousands, hundreds, tens, and ones • Generate a number that is greater than or less than a given whole number up to 1,200 • Locate the position of a given whole number on an open number line • Name the whole number that corresponds to s specific point on a number line • Use an understanding of place value to determine the number that is 10 or 100 more or less than a given number up to 1,200 • Determine the value of a collection of coins up to one dollar • Use the cent symbol, dollar sign, and the decimal point to name the value of a collection of coins • Explain that the length of a bar in a bar graph or the number of pictures in a pictograph represent the number of data points for a given category	• Solve one-step and multi-step word problems involving addition and subtraction within 1,000 using a variety of strategies based on the value, including algorithms. • Generate and solve problem situations for a given mathematical number sentence involving addition and subtraction of whole numbers within 1,000 • Recall basic facts to add and subtract within 20 with automaticity • Add up to four two-digit numbers and subtract two-digit numbers using mental strategies and algorithms based on knowledge of place value and properties of operations • Represent and solve addition and subtraction word problems where unknowns may be any one of the terms in that problem • Write and solve one-step word problems involving addition or subtraction using data represented within pictographs and bar graphs with intervals of one • Draw conclusions and make predictions from information in a graph	• Determine a solution to a problem involving length, including estimating lengths • Find the length of objects using concrete and models for standard units of length • Describe the inverse relationship between the size of the unit and the number of units needed to equal the length of an object • Represent whole numbers as distances from any given location on a number line • Determine the length of an object to the nearest marked unit using rulers, yardsticks, meter sticks, or measuring tapes • Use concrete models of square units to find the area of a rectangle by covering it with no gaps or overlaps, counting to find the total number of square units, and describing the measurement using a number line and the unit	• Explain that the more fractional parts used to make a whole, the smaller the part; and the fewer the fractional parts, the larger the part • Partition objects into equal parts and name the parts, including halves, fourths, and eights, using words • Use concrete models to count fractional parts beyond one whole using words and recognize how many parts it takes to equal one whole • Identify examples and non-examples of halves, fourths, and eighths • Classify and sort three-dimensional solids, including spheres, cones, cylinders, rectangular prisms, and triangular prisms, based on attributes using formal geometric language • Classify and sort polygons with 12 or fewer sides according to attributes, including identifying the number of sides and number of vertices • Create two-dimensional shapes based on given attributes, including number of sides and vertices • Compose two-dimensional shapes and three-dimensional solids with given properties or attributes • Decompose two-dimensional shapes such as cutting out a square from a rectangle , dividing a shape in half, or partitioning a rectangle into identical triangles and identify the resulting geometric parts
The teacher will:	• Provide opportunities for students to communicate and justify solutions to problems orally and in written form • Provide experiences for small group activities that are open-ended • Provide opportunities for students to organize and solve problems • Provide opportunities for students to solve problems individually, in pairs, and in small groups • Provide opportunities to use mathematical vocabulary • Provide opportunities to use technology to solve problems	• Provide experiences using base-ten materials and other manipulatives to build, represent and operate with whole numbers • Provide experiences with number lines and open number lines using whole numbers • Provide experiences for children to collect data, organize data, and create bar or picture graphs	• Provide students guidance in developing a problem solving plan • Provide experiences with part-part- whole models to demonstrate the patterns and relationships of basic facts • Provide opportunities for students to practice and master a variety of strategies such as counting on, doubles, making ten, etc. • Provide students guidance in creating 1 step word problems for peers to solve • Provide daily fluency activities to master instant recall of facts	• Provide experiences to make measurements of length and area • Provide opportunities for students to explore the relationship between measuring tools and length	• Provide experiences using concrete models to represent fractional parts • Practice oral recitation of fractional parts beyond one whole • Provide experiences with materials such as real objects and geometric shapes • Provide opportunities for students to communicate how they have sorted, created, or composed 2D and 3D shapes using formal geometry language
Parents can:	• Play board games that require your child to make choices • Ask your child to explain what they learned in math today • Read a variety of materials to your child and ask questions pertaining to the content • Model adult thinking as you solve common everyday problems including budgeting, time management, household chores, etc. • Set aside time to do daily math homework • Point out mathematics in games, sports, etc.	• Take opportunities at shopping outings to reinforce the concept of counting a collection of coins or comparing prices • Sequence whole dollar values on a number line, like the cost of a variety of toys from advertisements • Link cash money such as one, ten, and hundred dollar bills to place value concepts	• Play games that require instant recall of basic facts • Engage in mental math activities to add and subtract • Skip count with your child while jumping, walking or playing catch • Share situations related to your career or daily experiences that require addition or subtraction within 1000	• Measure lengths of common items in and around your home using rulers, yardsticks, meter sticks or measuring tapes • Challenge your child to an estimation contest to estimate and measure lengths or distances • Track family members' heights on chart or door • Discuss how space covered by furniture, flooring, etc represents the math concept of area	• Identify objects in the child's environment shaped like solid and plane figures • Use common foods such as pizza or fruit to discuss, count, and model fractional parts • Play "I spy" to find 2D and 3D shapes using geometry clues • Use common foods such as cookies or crackers to create or break apart 2D shapes