

| Unit # | Content | Essential questions | Objectives Skills Processes | Vocabulary | Assessment | Resources | Mn Standard & Benchmarks | Timeline |
|--------|---|--|---|--|---|---|--|---------------------------|
| Unit 1 | Geometry: Naming and Constructing Geometric Figures | <ol style="list-style-type: none"> Do students understand basic properties of geometric shapes? Are students able to explore, identify, and classify polygons? Can students understand angle and area as measureable attributes of real-world and mathematical objects? | <ol style="list-style-type: none"> Are students able to Classify shapes according to their properties; Can students explain the properties of a polygon; Do students understand line, line segment, and parallel line segments; Can students compare and contrast plane figures | Point, endpoint, line, ray, line segment, angle, circle, compass, congruent, equilateral triangle, hexagon, intersect, parallel lines segment, parallel lines, parallelogram, pentagon, perpendicular, quadrilateral, rectangle, rhombus, right angle, square, trapezoid, vertex | Summative Assessment Unit 1 Test -Individual Conference Formative Assessment -Daily Journal Pages -Exit Slip Mastery -iPad photo treasure hunt Informal Assessments -Guided Practice -Daily Observations -Station Activities | Supplemental station activities; IXL, Compasses, Student Journals, Reference Books, Whiteboards, Templates, Calculators, Promethean Board, Pencils, Activity Sheets, GeoBoards, Attribute Blocks, | 4.3.1.1 - Describe, classify and sketch triangles, including equilateral, right, obtuse, and acute triangles. Recognize triangles in various contexts. (more idenification in Unit 6: 6.6, 6.7) 4.3.1.2 - Describe, classify and draw quadrilaterals, including squares, rectangles, trapezoids, rhombuses, parallelograms and kites. Recognize quadrilaterals in various contexts. 4.3.2.2 - Compare angles according to size. Classify angles as accute, right, and obtuse. | 15 days |
| Unit 1 | Automaticity with Addition and Subtraction Facts | <ol style="list-style-type: none"> Are students able to use automatic recall of facts in various formats and settings? | Demonstrate automaticity with addition and subtraction facts through 10 +10 | Algorithm (only EDM), addition, subtraction | Unit 1 test, observation | Supplemental games and activities, MFIF | Mastery before fourth grade is expected | Included in above 15 days |
| Unit 2 | Using Numbers and Organizing Data | <ol style="list-style-type: none"> Are students able to examine and use equivalent names of numbers? Are students able to understand place value using the base-ten system? Are students able to add and subtract multidigit numbers? Can students collect, organize, display, and analyze data? | <ol style="list-style-type: none"> Can students recognize and use equivalent names for numbers? Do students understand base-ten place value? Are students able to Add and subtracting multidigit numbers? Can students collect, organize, display, and analyze data? | Equivalent, estimate, whole number (EDM), digit, value, sum, difference, strategy (method: EDM), maximum, minimum, range, mode, median, bar graph | Summative Assessment Unit 2 Test Formative Assessment -Daily Journal Pages Exit Slip Mastery Informal Assessments -Guided Practice -Daily Observations -Station Activities | Supplemental station activities, IXL, Student Journals, Reference Books, Whiteboards, Templates, Promethean Board, Calculators, Pencils, Activity Sheets, rulers, base-ten blocks | 4.1.1.2 - Use and understanding of place value to multiply a number by 10, 100, and 1000. 4.1.1.5 - Solve multi-step real world and mathematical problems requiring the use of addition, subtraction, and multiplication of multi-digit whole numbers. Use various strategies including the relationship between operations, the use of technology, and the context of the problem to assess the reasonableness of results. 4.4.1.1 - Collect, analyze, display and interpret adata, including data collected over a period of time and data represented by fractions and decimals. | 15 days |

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| Unit 3 | Multiplication and Division: Number Sentences and Algebra | <p>1. Can students identify and use a pattern? 2. Can students use data in a table? 3. Are students able to write number sentences? 4. Are students able to use logical reasoning to solve a problem? 5. Do students have mastery on instant recall of multiplication and division facts?</p> | <p>1. Can students identify patterns? 2. Are students able to use data in tables? 3. Can students explain strategies for solving number stories? 4. Are students able to write number models to represent number stories? 5. Do students have instant recall of multiplication and division facts?</p> | <p>Variable, number sentence (EDM), rule, solution, input/output, <u>strategy</u>, <u>solve</u>, <u>factors</u>, products, multiples</p> | <p>Summative Assessment Unit 3 Test Assessment -Daily Journal Pages -MFIF -IXL -Math wraps Informal Assessments -Guided Practice -Daily Observations -Station Activities -Discussions -Flashcards</p> | <p>Supplemental station activities, IXL, Student Journals, Reference Books, Whiteboards, Templates, Promethean Board, Calculators, Pencils, Activity Sheets, flashcards, math wraps, Math Facts in a Flash (MFIF)</p> | <p>4.2.2.1- Understand how to interpret number sentences involving multiplication, division, and unknowns. Use real-world situations involving multiplication of division to represent number sentences. 4.2.2.2- Use multiplication, division, and unknowns to represent a given problem situation using a number sentence. Use number sense, properties of multiplication, and the relationship between multiplication and division to find values for the unknowns that make the number sentences true. 4.4.1.1- Use tables, bar graphs, timelines, and Venn diagrams to display data sets. The data may include fractions or decimals. Understand that spreadsheet tables and graphs can be used to display data.</p> | 18 days |
| | | | | | | | <p>4.1.1.1 -Demonstrate fluency with multiplication and division facts. 4.2.1.1- Create and use input-output rules involving addition, subtraction, multiplication, and division to solve problems in various contexts. Record the inputs and outputs in a chart or table.</p> | |
| Unit 4 | Decimals and Their Uses | <p>1. Do students understand why decimals are useful? 2. Are students able to recognize a relationship among the different metric units of measurement? 3. Are students able to add and subtract decimals and apply the skill to real world problems?</p> | <p>1. Can students identify, read, and write base-ten place value system to the thousandths place using decimals? 2. Can students compare and order decimals in various contexts? 3. Are students able to show knowledge of adding and subtracting decimals? 4. Can students model how to use metric units of measurement?</p> | <p>Tenths, hundredths, thousandths, unit, decimal, centimeter, millimeter, meter (EDM), whole,</p> | <p>Summative Assessment Unit 4 Test Assessment -Daily Journal Pages IXL Informal Assessments -Guided Practice -Daily Observations -Station Activities Discussions Fact Triangles</p> | <p>Supplemental station activities, IXL, Student Journals, Reference Books, Whiteboards, Templates Promethean Board, Calculators, Pencils, Activity Sheets, base-ten blocks, money, meterstick, tape measure, centimeter ruler</p> | <p>4.1.1.5- Solve multi-step real world and mathematical problems requiring the use of addition, subtraction, and multiplication of multi-digit whole numbers. Use various strategies including the relationship between operations, the use of technology, and the context of the problem to assess the reasonableness of results. 4.1.2.4- Read and write decimals with words and symbols; use place value to describe decimals in terms of thousands, hundreds, tens, ones, tenths, hundredths, and thousandths. 4.1.2.5- Compare and order decimals and whole numbers using place value, a number line, and models such as grids and base 10 blocks.</p> | 15 days |
| | | | | | | | <p>4.1.2.6- Read and write tenths and hundredths in decimal and fraction notations using words and symbols; know the fraction and decimal equivalents for halves and fourths. 4.1.2.7- Round decimals to the nearest tenth (supplemental)</p> | |
| Unit 5 | Big Numbers, Estimation, and Computation | <p>1. Can students appropriately estimate in everyday situations? 2. Are students able to apply the appropriate methods for multiplying large numbers? 3. Do students understand large numbers?</p> | <p>1. Can students read, write, and compare large numbers? 2. Can students decide when to use estimation? 3. Can students multiply large numbers using a variety of methods?</p> | <p>Estimation, exponent, scientific notation, EDM- million, billion, trillion, quadrillion, quintillion, sextillion, partial-products</p> | <p>Summative Assessment Unit 5 Test Assessment -Daily Journal Pages IXL Informal Assessments -Guided Practice -Daily Observations -Station Activities Discussions</p> | <p>Supplemental station activities, IXL, Student Journals, Reference Books, Whiteboards, Templates Promethean Board, Calculators, Pencils, Activity Sheets, Fact Triangles, Multiplication and Division Facts Table</p> | <p>4.1.1.2- Use and understanding of place value to multiply a number by 10, 100, and 1000. 4.1.1.3 Multiply multi-digit numbers, using efficient and generalizable procedures, based on knowledge of place value including standard algorithms. 4.1.1.5- Solve multi-step real world and mathematical problems requiring the use of addition, subtraction, and multiplication of multi-digit whole numbers. Use various strategies including the relationship between operations, the use of technology, and the context of the problem to assess the reasonableness of results.</p> | 18 days |

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| | | | | | | | <p>4.2.2.1 Understand how to interpret number sentences involving multiplication, division, and unknowns. Use real-world situations involving multiplication or division to represent number sentences.</p> <p>4.2.2.2 Use multiplication, division, and unknowns to represent a given problem situation using a number sentence. Use number sense, properties of multiplication, and the relationship between multiplication and division to find values for the unknowns that make the number sentence true.</p> <p>4.1.1.4 Estimate products and quotients of multi-digit whole numbers by using rounding, benchmarks and place value to assess the reasonableness of results.</p> | |
| Unit 6 | Division; Map Reference Frames; Measures of Angles | <p>1. Do students understand how to apply strategies for multiplication and division?</p> <p>2. Are student able to recognize, identify, and classify angles in real world situations?</p> <p>3. Can students apply knowledge of a coordinate grid</p> | <p>1. Can students interpret a remainder?</p> <p>2. Are students able to determine the correct strategy to use when solving real world problems?</p> <p>3. Can students use a protractor to measure angles?</p> <p>4. Are students able to locate points on a grid using coordinates?</p> | <p><u>Dividend, divisor, quotient,</u> remainder, acute angle, angle, degree, obtuse angle, straight angle, reflex angle, right angle, vertex, order number pair, mixed number, EDM- longitude, latitude, protractor, rotation, map scale</p> | <p>Summative Assessment Unit 6 Test Formative Assessment -Daily Journal Pages IXL Informal Assessments -Guided Practice -Daily Observations -Station Activities Discussions</p> | <p>Supplemental station activities, IXL, Student Journals, Reference Books, Whiteboards, Templates Promethean Board, Calculators, Pencils, Activity Sheets, protractors, Multiplication and Division Facts Table, base-ten blocks, globe, compass</p> | <p>4.1.1.4 Estimate products and quotients of multi-digit whole numbers by using rounding, benchmarks and place value to assess the reasonableness of results</p> <p>4.1.1.6 Use strategies and algorithms based on knowledge of place value, equality and properties of operations to divide multi-digit whole numbers by one or two digit numbers.</p> <p>4.2.2.1 Understand how to interpret number sentences involving multiplication, division, and unknowns. Use real world situations involving multiplication or division to represent number sentences.</p> <p>4.2.2.2 Use multiplication, division, and unknowns to represent a given problem situation using a number sentence. Use number sense, properties of multiplication, and the relationship between multiplication and division to find values for the unknowns that make the number sentence true.</p> | 15 days |
| | | | | | | | <p>4.3.1.1 Describe, classify, and sketch triangles, including equilateral, right, obtuse and acute triangles. Recognize triangles in various contexts. 4.3.2.1 Measure angles in geometric figures and real-world objects with a protractor or angle ruler. 4.3.2.2 Compare angles according to size. Classify angles as acute, right or obtuse.</p> | |
| Unit 7 | Fractions and Their Uses; Chance and Probability | <p>1. Do students understand the relationship between fractions and decimals?</p> <p>2. Do students understand the concept of fractions?</p> <p>3. Can students use probability to predict and determine outcomes?</p> | <p>1. Can students locate fractions on a number line?</p> <p>2. Are students able to generate equivalent fractions?</p> <p>3. Can students rename fractions as decimals and decimals as fractions?</p> <p>4. Can students compare predicted and actual results from an experiment?</p> | <p><u>Denominator, numerator, equivalent,</u> fraction, <u>mixed number,</u> whole (EDM) probability, event, outcome, expect</p> | <p>Summative Assessment Unit 7 Test Formative Assessment -Daily Journal Pages IXL Informal Assessments -Guided Practice -Daily Observations -Station Activities Discussions -Fraction manipulative activities</p> | <p>Supplemental station activities, IXL, Student Journals, Reference Books, Whiteboards, Templates Promethean Board, Calculators, Pencils, Activity Sheets, pattern blocks, counters, deck of cards, fraction cards, base-ten blocks,</p> | <p>4.1.2.1 Represent equivalent fractions using fraction models such as parts of a set, fraction circles, fraction strips, number lines and other manipulatives. Use the models to determine equivalent fractions. 4.1.2.2 Locate fractions on a number line. Use models to order and compare whole numbers and fractions, including mixed numbers and improper fractions. 4.1.2.3 Use fraction models to add and subtract fractions with like denominators in real-world and mathematical situations. Develop a rule for addition and subtraction of fractions with like denominators.</p> | 18 days |

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| Unit 8 | Perimeter and Area | 1. Can students find the area and perimeter of a polygons in everyday life? | 1. Are students able to apply methods for finding area and perimeter for various shapes? | <u>Area</u> , perimeter, height, length, width, perpendicular, <u>variable</u> (EDM): equilateral triangle, isosceles triangle, formula, scale | Summative Assessment Unit 8 Test Formative Assessment -Daily Journal Pages - IXL Informal Assessments -Guided Practice -Daily Observations -Station Activities Discussions | Supplemental station activities, IXL, Student Journals, Reference Books, Whiteboards, Templates Promethean Board, Calculators, Pencils, Activity Sheets, yardstick, tape measure, straws, twist ties, globe | 4.3.2.3 Understand that the area of a 2-D figure can be found by counting the total number of same size square units that cover a shape without gaps or overlaps. Justify why length and width are multiplied to find the area of a rectangle by breaking the rectangle into one unit by one unit squares and viewing these as grouped into rows and columns. 4.3.2.4 Find the areas of geometric figures and real-world objects that can be divided into rectangular shapes. Use square units to label area measurements. | 10 days |
| Unit 9 | Fractions, Decimals, and Percents | 1. Do students understand equivalencies among fractions, decimals, and percents? 2. Are students able to organize, compare, and interpret data? 3. Are students able to apply the process of multiplying and dividing | 1. Can students convert between fractions, decimals, and percents? 2. Are students able to analyze results and make predictions based on collected data? 3. Can students solve multiplication and division problems involving decimals? | percent, <u>decimal</u> | Summative Assessment Unit 9 Test Formative Assessment -Daily Journal Pages - IXL Informal Assessments -Guided Practice -Daily Observations -Station Activities Discussions | Supplemental station activities, IXL, Student Journals, Reference Books, Whiteboards, Templates Promethean Board, Calculators, Pencils, Activity Sheets, world map, | 4.1.2.6 Read and write tenths and hundredths in decimal and fraction notation using words and symbols; know the fraction and decimal equivalents for halves and fourths. 4.1.2.7 Round decimals to the nearest tenth | 15 days |
| Unit 10 | Reflections and Symmetry | 1. Do students understand transformations and symmetry? 2. Are students able to interpret and understand integers? | 1. Do students understand the basic properties of reflections, translations, and rotations? 2. Can students identify lines of symmetry in shapes and real-world objects? 3. Can students use positive and negative integers to solve problems? | <u>Image</u> , <u>Congruent</u> , line of symmetry, line of reflection, <u>reflection (flip)</u> , <u>rotation (turn)</u> , <u>translation (slide)</u> , <u>symmetry</u> , <u>transformation</u> | Summative Assessment Unit 10 Test Formative Assessment -Daily Journal Pages - IXL Informal Assessments -Guided Practice -Daily Observations -Station Activities Discussions | Supplemental station activities, IXL, Student Journals, Reference Books, Whiteboards, Templates Promethean Board, Calculators, Pencils, Activity Sheets, transparent mirrors, ruler, pattern blocks, deck of cards, | 4.3.3.1 Apply translations (slides) to figures. 4.3.3.2 Apply reflections (flips) to figures by reflecting over vertical and horizontal lines and relate reflections to lines of symmetry. 4.3.3.3 Apply rotations (turns) of 90 degrees clockwise or counterclockwise. 4.3.3.4 Recognize that translations, reflections, and rotations preserve congruency and use them to show that two figures are congruent. | 8 days |
| Unit 11 | 3-D Shapes, Weight, Volume, and Capacity | 1. Are students familiar with geometric solids? | 1. Can students identify geometric solids and their properties? 2. Can students use properties of shapes to determine weight, capacity, and volume? | <u>Congruent</u> , face, edge, volume, <u>vertex</u> (EDM) cone, cube, cubic units, curved surface, cylinder, prism, dimensions, triangular prism, rectangular prism, triangular pyramid, square pyramid, capacity | Summative Assessment Unit 11 Test Formative Assessment -Daily Journal Pages - IXL Informal Assessments -Guided Practice -Daily Observations -Station Activities -Discussions -Promethean Activities | Supplemental station activities, IXL, Student Journals, Reference Books, Whiteboards, Templates Promethean Board, Calculators, Pencils, Activity Sheets, balance, scale, straws, twist ties, centimeter cubes, base-ten blocks, metersticks, centimeter ruler, number line, measuring cup, | 4.3.2.4 Find the areas of geometric figures and real-world objects that can be divided into rectangular shapes. Use square units to label area measurements | 10 days |
| Unit 12 | Rates | 1. Do students understand the concept of rates? | 1. Can student use, identify, and solve rates in word problems? | Rate | Summative Assessment Unit 12 Test Formative Assessment -Daily Journal Pages - IXL Informal Assessments -Guided Practice -Daily Observations -Station Activities Discussions | Supplemental station activities, IXL, Student Journals, Reference Books, Whiteboards, Templates Promethean Board, Calculators, Pencils, Activity Sheets, timer, | 4.2.2.1 Understand how to interpret number sentences involving multiplication, division and unknowns. Use real-world situations involving multiplication or division to represent number sentences. 4.4.1.1 Use tables, bar graphs, timelines, and Venn Diagrams to display data sets. The data may include fractions or decimals. Understand that spreadsheet tables and graphs can be used to display data. | 8 days |

