

Curriculum Map Grade 3 Mathematics for:

Prerequisites: Completion of Grade 2

Scope: Woven throughout the content are themes of problem solving, reasoning, communication, and representation. Fluency is developed in addition, subtraction, multiplication (12 x 12), and single digit division. Equivalent representations are generated through a study of fractions. Attributes of three-dimensional shapes are identified. Students apply standard units to measure length, weight, capacity, and time. Data representation continues as students make connections between math in daily life and across the curriculum.

Assessment:

Assessment comes in a variety of forms and wherever possible should be used to reflect and enhance the teaching and learning process that occurs in a classroom. Assessment should not be seen as a separate activity, but as an integral part of the teaching and learning process. Alternative assessments apply to any and all assessments that differ from multiple choice, timed, one-shot approaches that characterize most standardized and classroom assessment. Authentic assessments are assessments that engage students in applying knowledge and skills in the same way they are used in the real-world. Performance assessment is a broad term, encompassing many of the characteristics of both authentic and alternative assessments.

As this course of study demonstrates, it is clear that no single type of assessment could provide an accurate measurement of the learning experience. Students should have the best opportunity to demonstrate their understanding of the learning experience. Therefore, it is suggested that a variety of data gathering methods be used such as objective tests, observations, products, written reports, performances and a collection of student works.

This Curriculum Map:

This document contains four different columns available to the user. The **TIME** column offers a suggested timeline so that all topics in the **CONTENT/SKILLS** column are feasibly met. It is understood that times will need to be adjusted as the course develops. The mapping of content to present textbooks can occur in the **C/S** column. The **PERFORMANCE INDICATOR** column aligns topics in **C/S** with the NYS Standards. The **APPLICATION/PROJECT IDEAS** column is designed to offer unique or novel suggestions and sources for the teacher other than just their textbook. Mapping of content to present textbooks may also occur in this column. Discussions of different types of evaluation may also occur in this last column.

TIME	CONTENT / SKILLS	PERFORMANCE INDICATOR	APPLICATIONS / IDEAS
September	<p>Place Value and Money Chapter 1 Read and write numbers in the hundreds, thousands and hundred thousands place</p> <p>Explore place value relationships</p> <p>Compare and order numbers</p> <p>Round 2 and 3 digit numbers to the nearest 10 and 100's Solve problems by making an organized list</p> <p>Find the value of coins and groups of coins Write money amounts in dollars & cents</p> <p>Explore making change Add money amounts</p>	<p>3.N.4 Understand the place value structure of the base ten number system: (10 ones=1 ten,10 tens = 1hundred, 10 hundreds = 1 thousand)</p> <p>3.N.2 Read and write whole numbers to 1000</p> <p>3.N.3 Compare and order numbers to 1000</p> <p>3.N.1 Skip count by 25's, 50's, 100's to 1000's</p> <p>3.N.5 Use a variety of strategies to compose and decompose 3 digit numbers</p> <p>3.A.2 Describe and extend numeric (+,-) and geometric patterns</p> <p>3.N.25 Estimate numbers up to 500</p> <p>3.N.16 Identify odd and even numbers</p> <p>3.PS.14 Make organized lists to solve numerical problems</p> <p>3.CM.1 Understand and explain how to organize their thought process</p> <p>3.RP.1 Use representations to support mathematical ideas</p> <p>3.M.7 Count and represent combined coins and dollars, using currency symbols (\$0.00)</p> <p>3.PS.25 Determine whether a solutions is reasonable in the context of the original problem</p>	<p>Review often with students</p> <p>Manipulatives & games very helpful</p> <p>Introduce vocabulary/concept of decimal point</p>

TIME	CONTENT / SKILLS	PERFORMANCE INDICATOR	APPLICATIONS / IDEAS
October	<p>Addition & Subtraction Number Sense Chapter 2</p> <p>Explore addition patterns</p> <p>Use rounding to estimate sums</p> <p>Explore algebra by finding missing numbers</p> <p>Explore addition with regrouping</p> <p>Use mental math to find sums</p> <p>Relating Addition & Subtraction</p> <p>Use counting on to subtract mentally</p>	<p>3.N.17 develop an understanding of the properties of odd/even numbers as a result of addition and subtraction</p> <p>3.A.1 Use the symbols $<$, $>$ & $=$ (with and without the use of a number line) to compare whole numbers and unit fractions</p> <p>3.N.6 Use and explain commutative property of addition and multiplication</p> <p>3.N.9 Understand and use the associative property of addition</p> <p>3.P.23 Verify results of a problem</p> <p>3.N.27 Check reasonableness of an answer by using estimation</p> <p>3.N.26 Recognize real world situations in which an estimate (rounding) is more appropriate</p>	<p>Addition facts charts are helpful</p> <p>The use of "fact families" is very helpful here</p> <p>Review place value concepts to help with regrouping Give ample practice time. Have students take turns explaining their work</p>

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November	<p>Addition & Subtraction Chapter 3 Add 2, 3 and 4 digit numbers digit numbers</p> <p>Review the meaning of subtraction and regrouping using 2 and 3 digit numbers</p> <p>Estimate differences using rounding</p> <p>Explore subtracting 2, 3 & 4 digit numbers</p> <p>Subtract 2, 3 & 4 digit numbers</p> <p>Subtract with 2 regroupings Subtract across zeros Solve multiple step problems</p> <p>Add & Subtract money Solve problems by using objects</p>	<p>3.N.18 Use a variety of strategies to add and subtract 3-digit numbers (with and without regrouping)</p> <p>3.CM.11 Decode and comprehend mathematical visuals and symbols to construct meaning</p> <p>3.N.26 Recognize real world situations in which an estimate (rounding) is more appropriate</p> <p>3.R.1 Use verbal and written language, physical models, drawings, charts and graphs, tables, symbols and equations as representations</p> <p>3.N.18 Use a variety of strategies to add and subtract 3-digit numbers (with and without regrouping)</p> <p>3.CM.3 Provide reasoning, both in written and verbal form</p> <p>3.PS.13 Work in collaboration with others to solve problems</p> <p>3.PS.12 Use physical objects to solve problems</p>	<p>Review place value concepts to help with regrouping</p> <p>Use fact cards and manipulatives from kit</p>

TIME	CONTENT / SKILLS	PERFORMANCE INDICATOR	APPLICATIONS / IDEAS
December	<p>Time, Data & Graphs Chapter 4</p> <p>Tell time to nearest half and quarter hour</p> <p>Tell time to the nearest minute</p> <p>Read a pictograph and bar graph</p> <p>Understand elapsed time</p> <p>Identify the elements and relationships in a calendar</p> <p>Solve problems by choosing an operation</p> <p>Use tally charts to record and organize data</p> <p>Read and interpret a line plot, and find the mode and the range for the data in a line plot</p> <p>Explore making pictographs and bar graphs</p> <p>Locate & graph ordered pairs on a coordinate grid</p> <p>Solve problems by collecting and analyzing data and finding patterns</p>	<p>3.M.8 Relate unit fractions to the face of a clock: Whole + 60 minutes, $\frac{1}{2}$ + 30 minutes, $\frac{1}{4}$ + 15 minutes</p> <p>3.M.9 Tell time to the minute, using digital and analog clocks</p> <p>3.S.4 Identify the parts of pictographs and bar graphs</p> <p>3.S.1 Formulate questions about themselves and their surroundings</p> <p>3.S.2 Collect data using observation and surveys, and record appropriately</p> <p>3.S.3 Construct a frequency table to represent a collection of data</p> <p>3.S.7 Read and interpret data in bar graphs and pictographs</p> <p>3.S.6 To state the relationships between pictographs and bar graphs</p> <p>3.S.5 To display data in pictographs and bar graphs</p> <p>3.S.8 Formulate conclusions and make predictions from graphs</p>	<p>Focus on conventional ways to tell time and expose to other ways of telling time</p> <p>Clock manipulatives are helpful</p>

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December	<p>Using Geometry Chapter 8 Explore solids</p> <p>Classify space figures, and identify the faces, edges, and corners of figures</p> <p>Explore connecting solids and shapes</p> <p>Identify lines, line segments, rays, parallel lines and intersecting lines Explore angles Identify different triangles Explore flips, slides, turns and congruency</p> <p>Make and identify symmetrical figures and draw a line of symmetry Explore perimeter and area</p> <p>Solve problems by using area</p>	<p>3.G.1 Define and use correct terminology when referring to shapes (circle, triangle, square, rectangles, rhombus, trapezoid and hexagon) 3.G.3 Name, describe, compare, and sort 3-dimensional shapes: cube, cylinder, sphere, prism and cone</p> <p>3.G.4 Identify the faces on a 3-dimensional shape as 2-dimensional shapes 3.CM.10 Describe objects, relationships, solutions and rationale using appropriate vocabulary</p> <p>3.RP.1 Use representations to support mathematical ideas</p> <p>3.G.2 Identify congruent and similar figures 3.G.5 Identify and construct lines of symmetry</p> <p>3.CM.4 Organize and label work accurately</p>	<p>Use kit manipulatives</p>

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	<p>Explore patterns when multiplying with 0 and 1</p> <p>Multiply with 9 as a factor</p> <p>Solve problems by making decisions about which information is important and by identifying what information is missing</p> <p>Solve problems by drawing a picture</p>	<p>3.N.7 Use 1 as the identity element for multiplication</p> <p>3.N.8 Use the zero property of multiplication</p> <p>3.PS.18 Analyze problems by observing patterns</p> <p>3.PS.16 Analyze problems by identifying relationships</p>	

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<p>January</p>	<p>More Multiplication Facts Chapter 6</p> <p>Multiply with 3,4,6,7 & 8 as factors</p> <p>Solve problems by making a table</p> <p>Multiply with 3 factors</p> <p>Solve problems by comparing different strategies to solve the same problem</p>	<p>3.N.9 Develop fluency with single digit multiplication facts</p> <p>3.A.2 Describe and extend numeric (+, -) and geometric patterns</p> <p>3.N.21 Use the area models, tables, patterns, arrays and doubling to provide meaning for multiplication</p> <p>3.PS.11 Make pictures/diagrams of problems</p> <p>3.PS.22 Discuss the efficiency of different representations of a problem</p> <p>3.PS.17 Analyze problems by identifying relevant versus irrelevant information</p>	<p>Multiplication Bingo game is a great review</p>
<p>February</p>	<p>Fractions and Measurement Chapter 9</p> <p>Explore equal parts</p> <p>Name and write fractions</p> <p>Find equivalent fractions</p> <p>Compare and order fractions</p> <p>Estimate fractional parts</p> <p>Identify and locate fractions on a number line</p>	<p>3.N.10 Develop an understanding of fractions as part of a whole and as part of a collection</p> <p>3.N.11 Use manipulatives, visual models and illustrations to name and represent unit fractions as part of a whole or a set of objects</p> <p>3.N.13 Recognize fractional numbers as equal parts of a whole</p> <p>3.N.12 Understand and recognize the meaning of a numerator and denominator in the symbolic form of a fraction</p> <p>3.N.14 Explore equivalent fractions</p> <p>3.N.15 Compare and order unit fractions and find their appropriate locations on a number line</p>	<p>Use fractions strips and manipulatives from kit</p>

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	Find fractional parts of sets or groups Add and subtract fractions Read and write mixed numbers Explore length in feet and inches Measure to the nearest $\frac{1}{2}$ and $\frac{1}{4}$ Estimate and compare measurement in inches, feet, yards and miles	3.M.1 Select tools appropriate for length measured 3.M.2 Use a ruler/yardstick to measure to the nearest standard unit (whole and $\frac{1}{2}$ inches, whole feet and whole yards)	Use kit manipulatives for hands on tasks

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	<p>Explore division stories</p> <p>Use multiplication to divide</p> <p>Divide by 2, 5, 3, 4, 6, 7, 8 & 9</p> <p>Explore 0 and 1 in division</p> <p>Explore even and odd numbers</p> <p>Find remainders for simple division problems</p> <p>Recognize which numbers are divisible by 10, 11 and 12</p>	<p>3.CN.1 Recognize, understand and make connections in their everyday experiences to mathematical ideas</p> <p>3.N.22 Demonstrate fluency and apply single digit division facts</p> <p>3.R.2 Share mental images of mathematical ideas and understandings</p> <p>3.R.6 Connect mathematical representatons with problem solving</p>	

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April	<p>Multiplying and Dividing Chapter 11</p> <p>Use mental math to multiply by multiples of 10, 100 and 1,000</p> <p>Estimate products by rounding</p> <p>Explore multiplying tens</p> <p>Explore multiplication patterns</p> <p>Estimate products</p> <p>Multiply 2 digit numbers with regrouping</p> <p>Multiply 3 digit numbers</p> <p>Multiply money</p> <p>Solve problems by making a table</p> <p>Explore division patterns</p> <p>Estimate quotients using basic division facts</p> <p>Divide to find quotients and remainders</p> <p>Decide how to use the quotient and remainder to answer the question in a division problem</p>	<p>3.N.24 Develop strategies for selecting appropriate computational and operational methods in problem solving</p> <p>3.N.25 Estimate numbers up to 500</p> <p>3.N.20 Use a variety of strategies to solve multiplication problems with factors up to 12x12</p> <p>3.CN.4 Understand multiple representations and how they are related</p> <p>3.N.27 Check reasonableness of an answer by using estimation</p> <p>3.R.6 Connect mathematical representations with problem solving</p> <p>3.CN.6 Recognize the presence of mathematics in their daily life</p> <p>3.N.23 Use tables, patterns, halving and manipulatives to provide meaning for division</p>	
May	<p>Measurement and Probability Chapter 12</p> <p>Explore capacity in customary units</p> <p>Estimate and compare measurement in liters and milliliters</p> <p>Explore weight in customary units (cups, pints, quarts and gallons)</p> <p>Estimate and compare measurement in grams and kilograms</p>	<p>3.M.3 Measure objects, using ounces and pounds</p> <p>3.M.4 Recognize capacity as an attribute that can be measured</p> <p>3.M.5 Compare capacities (e.g., Which contains more? Which contains less?)</p>	

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	Estimate and compare measurement in degrees Fahrenheit and Celsius Describe if an event is certain, impossible or possible. If an event is possible, decide if it is likely or unlikely	3.M.10 Select and use standard (customary) and non-standard units to estimate measurements	

Teachers please note the following: We may be finished with the text at this point of the school year. For the remainder of the year it is advised that you review those topics of greatest difficulty for your students (fractions, decimals, word problems, etc.). This may also be a good time to focus on the Pre-March skills of the next grade level's curriculum.