

Curriculum Mapping, Alignment, and Analysis
Glen Lake Community Schools

Grade: _1__ Content Area: Math Course: _____ Revised June 13, 2007

drm (11/29/01)

Month	Essential Questions <i>What are the fundamental, enduring questions that will guide study and instruction?</i>	Content <i>What is being covered and what is the important vocabulary? What do students need to know?</i> (Topics, Issues, works, problems, themes)	Skills <i>Use verbs to tell: What do students have to be able to do connected to the content?</i>	Assessment <i>Use nouns to describe: What evidence (products and/or performances) is collected to establish that the Content and Skills have been learned about the Essential Questions?</i>	Grade Level Expectations
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September	What is a pattern? How do patterns change?	Patterns, relationships and functions Vocabulary Create Attributes Trapezoid Rhombus Square Triangle Pattern Hexagon	<ul style="list-style-type: none"> -Identify pattern-model -Reproduce patterns -Extend patterns -Create patterns -Use tables, charts, pictures and graphs to describe and analyze patterns -Recognize numerical patterns -Solve problems using patterns -Use patterns to describe the environment -Describe the pattern: repeating, growing, shrinking, combination, symmetry -Recognize change and variability when it occurs in a variety of setting -Identify and describe predictable changes -Recognize that patterns emerge that help to describe change -Explore relationships among patterns -Examine change in weather, seasons, calendar, life-cycles -Make and justify predictions 	<ul style="list-style-type: none"> -Teacher observation of the skills -Paper and pencil tasks 	<p>G.SR.01.03 Create and describe patterns, such as repeating patterns and growing patterns using number, shape, and size.</p> <p>G.SR.01.04 Distinguish between repeating and growing patterns.</p> <p>G.SR.01.05 Predict the next element in a simple repeating pattern.</p> <p>G.SR.01.06 Describe ways to get to the next element in simple repeating patterns.</p>

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October	How are shapes similar and different? How do we use and describe position?	Geometry	Vocabulary: Segment Point Polygon Curve Circle Rhombus Triangles Squares Rectangle Oval Cubes Cones Sphere Sides Corners Faces Line	Name and describe: Circles, squares, rectangles, triangles, polygons, rhombus, oval, cubes, cones, spheres Describes properties: sides, corners, face Compares, sort, and classify shapes Combine, dissect and transform these and other shapes using concrete objects. Begin to recognize parallel, perpendicular properties using informal language along with similarity, congruence Use shape, shape properties and shape relationships to describe the physical world and solve problems.	G.GS.01.01 Create common two-dimensional shapes, and describe their physical and geometric attributes, such as color and shape. G.GS.01.02 Describe relative position of objects on a plane and in space, using words such as above, below, behind, in front of.

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November	<p>What are the attributes we can measure? What can we measure? How is comparison like measurement? How do we read an analog clock to the hour and half hour? What are the values of pennies, nickels, dimes, quarters, and dollars How do pennies, nickels, dimes, quarters, and dollars compare to each other?</p>	<p>Measurement</p> <p>Month Days unit Capacity Volume weight/mass Length Height Width Measure Degree Straight Edge Digital/analog Hour and minute hand Colon Degrees Fahrenheit Celsius Penny Nickel Dime Quarter \$ ¢</p>	<p>To identify attributes to be measured -Weight/mass -Capacity/volume -Length -Temperature -Time, hour, day, week, months -Penny, nickel, dime, quarter To select appropriate tools to measure: -Balance scales -Thermometer -Coins -Clock -Graduated Containers Develop strategies for estimating Problem solve Compare an analog and digital clock. Give values of and compare money; penny, nickel, dime, quarter, and dollar. Tell time to the hour and half hour. Order items using the words: shorter, shortest, longer, longest, taller, tallest, etc.</p>	<p>-Teacher observation of the skills -Paper and pencil tasks</p>	<p>M.UN.01.01 Measure the lengths of objects in non-standard units, e.g., pencil lengths, shoe lengths, to the nearest whole unit. M.UN.01.02 Compare measured lengths using the words shorter, shortest, longer, longest, taller, tallest, etc. M.UN.01.03 Tell time on a twelve-hour clock face to the hour and half-hour. M.UN.01.04 Identify the different denominations of coins and bills. M.UN.01.05 Match one coin or bill of one denomination to an equivalent set of coins/bills of other denominations, e.g., 1 quarter= 2dimes and 1 nickel. M.UN.01.06 Tell the amount of money: in cents up to \$1, in dollars up to \$100. Use the symbols \$ and ¢. M.PS.01.07 Add and subtract money in dollars only or in cents only.</p>

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December	What is a pictograph? How do we read a pictograph? What does the data tell us? How do we conduct a survey? What is a tally mark? How can tally marks help us collect data? How can tally marks help us skip count by 5s and 10s?	Data and Probability Vocal: Tally Tally marks Set Compare Diagram Object graph Pictograph Sample	Pose questions Read and interpret pictographs. Make a picture graph given data. Use tally marks Collect data using tally marks. (lunch count) Add up tally marks. (data) Make conclusions and predictions based on data.	-Teacher observation of the skills -Paper and pencil tasks	D.RE.01.02 Read and interpret pictographs. D.RE.01.03 Make pictographs of given data using both horizontal and vertical forms of graphs: scale should be in units of one and include symbolic representations.

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January	<p>What do numerals represent?</p> <p>How do numbers relate to one another?</p> <p>How do we skip count by 2s, 5s, and 10s?</p>	<p>Number Sense</p> <p>Number Relationships</p>	<p>Vocabulary Numerals, grids, Skip counting</p> <p>Vocabulary >,<,= Sum Equal Equal sign Position Ordinal position Ordinal numbers</p>	<ul style="list-style-type: none"> -Recognize and read 2-3 digit numbers in dot grids, words and numerals. -Recognize ordinal numbers and words to 10 -Write numbers 1-110 -Compare and order numbers to 100 -Use part/whole relationships -Develop strategies to classify numbers -Apply numbers relationships to solve problems <p>Count 110 by 1's, 2's, 5's and 10's to 110.</p> <p>Use ordinals to identify the position of objects in a sequence, e.g., 1st, 2nd, 3rd.</p> <p>.</p>	<p>N.ME.01.01 Count 110 by 1's, 2's, 5's and 10's, starting from any number in the sequence; count to 500 by 100's and 10's; use ordinals to identify position in a sequence, e.g., 1st, 2nd, 3rd. N.ME.01.02 Read and write numbers to 110 and relate them to the quantities they represent. N.ME.01.03 Order numbers to 110; compare using phrases such as "same as", "more than", "greater than", "fewer than"; use = symbol. Arrange small sets of numbers in increasing or decreasing order, e.g., write the following from smallest to largest: 21, 16, 35, 8. N.ME.01.04 Identify one more than, one less than, 10 more than, and 10 less than for any number up to 100. N.ME.01.05 Understand that a number to the right of another on the number line is bigger and that a number to the left is smaller.</p>

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February	How do numbers relate to one another? What are hundreds, tens, and ones blocks? How can we use hundreds, tens, and ones blocks to represent a number? What is a fact family? How can we use a fact family to help us memorize math facts?	Use of Numbers Vocabulary > Greater than, < Less than, sum, equal, equal sign, position Ones Tens Hundreds Fact family	-Represent whole numbers to 100 and fractions (1/2, 1/3, 1/4) using concrete and pictorial methods -Develop strategies for estimating and evaluating reasonableness up to 100 -Examine and recognize ways different representation for the same number -Demonstrate ways numbers are used: count, order, name, locate, measure Represent numbers using hundreds, tens, and ones blocks. Count backwards by 1's from 100. Create a fact family	-Teacher observation of the skills -Paper and pencil tasks	N.ME.01.03 Order numbers to 110; compare using phrases such as “same as”, “more than”, greater than”, “fewer than”; use = symbol. Arrange small sets of numbers in increasing or decreasing order, e.g., write the following from smallest to largest: 21, 16, 35, 8. N.ME.01.05 Understand that a number to the right of another on the number line is bigger and that a number to the left is smaller. N.ME.01.06 Count backwards by 1's starting from any number between 1 and 100. N.ME.01.07 Compose and decompose numbers through 30, including using bundles of tens and units, e.g., recognize 24 as 2 tens and 4 ones, 20 and 4, and 24 ones. N.MR.01.13 Apply knowledge of fact families to solve simple open sentences for addition and subtraction, such as $_ + 2 = 7$ and $10 - _ = 6$.

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March	<p>How do we use operations?</p> <p>How do we think when we solve problems?</p> <p>What are the ways we solve problems?</p>	<p>Understand and utilize operations and properties</p>	<p>Vocabulary: Addition Subtraction Difference Sum Numerical sense Numerical Sentence Solve Algorithm Unknown Operation Total “+” “-“ Signs Fact families</p> <p>Utilize manipulative to model addition and subtraction.</p> <p>Develop methods of recording operations. Relate models and recordings to standard symbols, expressions and algorithms.</p> <p>Add and subtract up to 20.</p> <p>Develop and apply strategies for adding and subtracting facts up to 10 including counting back, turn around, counting on, doubles, and doubles plus/minus one.</p> <p>Describe properties of operations</p> <p>Choose operations to solve problems..</p> <p>Write and solve open-ended sentences.</p> <p>Explore algebraic concepts with manipulative such as balance scales, tables of input and output and pictorial representations of problems.</p> <p>Find replacements for variables in open sentences (example: ___ + 4 = 12; 12 - ___ = 4;)</p> <p>Use algebraic thinks to describe situations and solve problems.</p>	<p>Teacher observation of skills.</p> <p>Paper and pencil tasks.</p> <p>TSW:</p> <ul style="list-style-type: none"> -Make combinations of 10 using 2 colors of cubes. -Show addition using dominos. -Develop methods of recording numbers (tally marks, pictures) -Add or subtract using number grid and/or number line. -Decide if a story problem needs addition or subtraction. -Use a picture background and manipulative to practice each open ended “+” “-“ number sentence -Create story problems to go with each of the open ended number sentences. 	<p>N.ME.01.08 List number facts (partners inside of numbers) for 2 through 10, e.g., $8 = 7 + 1 = 6 + 2 = 5 + 3 = 4 + 4$; $10 = 8 + 2 = 2 + 8$.</p> <p>N.MR.01.09 Compare two or more sets in terms of the difference in number of elements.</p> <p>N.MR.01.10 Model addition and subtraction for numbers through 30 for a given contextual situation using objects or pictures; explain in words; record using numbers and symbols; solve.</p> <p>N.MR.01.11 Understand the inverse relationship between addition and subtraction, e.g., subtraction “undoes” addition: if $3 + \% = 8$, we know that $8 - 3 = 5$ and $8 - 5 = 3$; recognize that some problems involving combining, “taking away”, or comparing can be solved by either operation.</p> <p>N.FL.01.14 Add three one-digit numbers.</p> <p>N.FL.01.15 Calculate mentally sums and differences involving: a two-digit number and a one-digit number without</p>

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April	How do we collect data? How do we use collected data in a pictograph?	Data and Probability Survey Collect, organize and present data in a pictograph. Identify attributes of objects. Compare objects by stated criteria	-Collect data -Make a pictograph using collected data.	Teacher observation of skills. Paper and pencil tasks.	D.RE.01.01 Collect and organize data to use in pictographs. D.RE.01.02 Read and interpret pictographs. D.RE.01.03 Make pictographs of given data using both horizontal and vertical forms of graphs: scale should be in units of one and include symbolic representations.
May	What are ways to classify objects into sets?	Exploring discrete math Vocabulary: Set Attribute Classify	Pattern Identify attributes of objects. Compare objects by stated criteria. Rank objects by volume, weight, and height. -Sort objects by # sides, color, size, etc.) -Discuss possible outcomes of an event	Teacher observation of skills. Paper and pencil tasks.	N.ME.01.01 Count 110 by 1's, 2's, 5's and 10's, starting from any number in the sequence; count to 500 by 100's and 10's; use ordinals to identify position in a sequence, e.g., 1 st , 2 nd , 3 rd .

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June	Have I memorized my math facts? How do we review a year of math?	Numbers and Operations Review Vocabulary	Complete worksheets in relationship to various functions (add, subtract, skip count) .	Teacher observation of skills. Paper and pencil tasks. .	N.FL.01.012 Know all the addition facts up to $10 + 10$, and solve the related subtraction problems fluently. N.FL.01.16 Compute sums and differences through 30 using number facts and strategies, but no formal algorithm.