Cologne Academy

Mathematics Department

Grade 2 Math

(Aligned Text: Primary Mathematics - Standards Edition**)**

Core Knowledge Curriculum – 100% Aligned

Adopted: 08/2014

Board Approved: 07/24/2014

Updated: 08/12/2017 AU

Table of Contents

Units and Pacing Charts

Highlighted items indicate overlap of MN State Standards and the Core Knowledge Sequence.

Boxed items indicate content to be introduced post-MCAs.

Math Department Lesson Plan Essentials

Topic: Title of lesson.

*Objective: Academic goal for students to achieve by end of lesson.

*Benchmark Reference: MN State Standard or Core Knowledge Sequence reference.

Agenda: Sequence of instruction and activities

Closure: Brief summary/overview of lesson. May include formative assessment.

Homework: Continued practice of lesson. May be used as formative assessment.

*Indicates required components.

Note: The text has been as closely aligned with MN State Standards but additional resources may be required to include all skills (including within the Core Knowledge Sequence). Resources may be located on the s:drive under Mathematics Resources and by grade level or on the Cologne Academy intranet. Further research/exploration may be required to locate additional resources.

Important Dates 2017 – 2018
Pretest: 28 – 29 August
Interim 1: 30 – 31 October
Interim 2: 11 – 12 January
Interim 3: 19 – 20 March
Interim 4: 14 – 15 May
OLPA: 29 January – 2 February
MCA: 17 – 19 April
Dates may be subject to change.

Overview

Strand(s): Number & Operation

Unit 1: Comparing, Ordering, Place Value and Core Knowledge

Approximate Duration of Study: 8 Weeks Between Interims.

MNSS	Knowledge	Skills
Fluency 2.1.2.2	**Students will know that:** • Addition increases a value, subtraction decreases a value • There is a relationship between addition and subtraction facts.	**Student will be able to:** • Demonstrate fluency with basic addition facts and related subtraction facts.
Place Value 2.1.1.2	**Students will know that:** • 100 is 10 tens, and 1000 is 10 hundreds.	**Student will be able to:** • Use **place value** to describe **whole numbers** between 10 and 1000 in terms of thousands (introduction), hundreds, tens and ones. • Count by hundreds to 1,000.
Numbers 2.1.1.1 2.1.2.1 (Counting on, counting back only)	**Students will know that:** • Numbers can be represented by **numerals**, addition, subtraction, words, pictures, **number lines**, **tally marks**, manipulatives such as bundles of sticks and base 10 blocks. • By adding or subtracting 1 more or 1 less the digit in the ones place will increase or decrease by 1.	**Student will be able to:** • Read, write and represent whole number up to 1000. • Represent numbers in **standard form**, **expanded form**, **written form**, **place value form**. o *Writing 853 is a shorter way of writing 8 hundreds + 5 tens + 3 ones.* • Count on or count back from a given two-digit or three-digit number.
10 More/Less 2.1.1.3 (Two-digits only)	**Students will know that:** • By adding or subtracting 10 more or 10 less the digit in the tens place will increase or decrease by 1.	**Student will be able to:** • Find 10 more or 10 less of a given two-digit number.
Compare and Order 2.1.1.5	**Students will know that:** • " **<** " represents **less than.** • " **>** " represents **greater than.** • " **=** " represents **equal to**. • Place value and **inequality symbols** can be used to order and compare numbers.	**Student will be able to:** • **Compare** and **order** whole numbers up to 1000.

	Students will know that:	Student will be able to:
Core Knowledge Number Sense	• There is a name for numerical positions.	• Identify **ordinal positions**, 1st to 20th.
	• In order for a number to be **even** the last digit must be a 0, 2, 4, 6, or 8. • Even numbers can be split into groups, with each group containing the same amount of numbers, objects, symbols, etc. • In order for a number to be **odd** the last digit must be a 1, 3, 5, 7, or 9. • Odd numbers can be split into groups, with each group containing the same amount (of numbers, objects, symbols, etc.) but always having an unequal group remaining. ○ *A group of 25 students can be split into 5 groups of 5 but 25 is not an even number because it does not end in 0, 2, 4, 6, or 8.*	• Identify even and odd numbers.
	• A given amount of objects can be identified by different names.	• Identify **dozen**, **half-dozen** and **pair**. • Achieve timed mastery of addition facts (2 seconds)

Essential Vocabulary: Digit, Place Value, **Expanded Form**, **Written Form**, **Place Value Form**, **Standard Form**, Tally Mark, Number Lines, **Numerals**, Whole Numbers, **Inequality Symbols**: Less Than (<), Greater Than (>); Equal To (=), Compare, Order, Ordinal Position (st, nd, rd, th), Even, Odd, Dozen, Half-Dozen, Pair.

Interim 1

Pacing Chart
Unit 1: Comparing, Ordering, Place Value and Core Knowledge

Time Frame	Topic	Suggested Activities/Assessments	Resources & Text Alignment
All Units	Fluency 2.1.2.2	Rocket Math Flash Cards Games: Math War, Fast Flash, Double Bubble, Around the World, etc. www.superteacherworksheets.com www.worksheetworks.com	Rocket Math IXL
Week 1	(Week 1 – Routines, Rocket Math, Pre-test etc.)		
Week 2	Place Value 2.1.1.2	www.superteacherworksheets.com www.worksheetworks.com	PM Text Unit 1 – Numbers to 1000 IXL
Week 3 – Week 4	Numbers 2.1.1.1 2.1.2.1 (Counting on, counting back only)	www.superteacherworksheets.com www.worksheetworks.com	PM Text Unit 1 – Numbers to 1000 s:MathematicsResources:Grade2:NumberLineMixed IXL
Week 5	10 More/Less 2.1.1.3 (Two-digits only)	www.superteacherworksheets.com www.worksheetworks.com	PM Text Unit 1 – Numbers to 1000 IXL
Week 6	Compare and Order 2.1.1.5	www.superteacherworksheets.com www.worksheetworks.com	PM Text Unit 1 – Numbers to 1000 IXL

Week 7	Core Knowledge Number Sense	www.superteacherworksheets.com www.worksheetworks.com	s:MathematicsResources:Grade2:OrdinalPositions s:MathematicsResources:Grade2:DozenHalfDozenPair IXL
Week 8 – Week 9	Review		
Week 10	Interim 1		

<p style="text-align:center"><u>Overview</u></p>

Strand(s): Number & Operation

Unit 2: Addition and Subtraction

Approximate Duration of Study: 8 Weeks Between Interims.

MNSS	Knowledge	Skills
Fluency 2.1.2.2	**Students will know that:** • Addition increases a value, subtraction decreases a value • There is a relationship between addition and subtraction facts.	**Student will be able to:** • Demonstrate fluency with basic addition facts and related subtraction facts. • Achieve timed mastery of addition facts (2 seconds). • Achieve mastery of subtraction facts.
Strategies 2.1.2.1	**Students will know that:** • Strategies are used to generate addition and subtraction facts.	**Student will be able to:** • Use strategies to generate and solve basic addition and subtraction facts. ○ *Strategies include:* **making tens**, **fact families**, **doubles plus or minus one** *and commutative and associative properties* • Use the relationship between addition and subtraction to generate and check basic facts.

	• **Commutative Property of Addition** allows for the numbers in an addition problem to be switched without changing the value of the problem.
	   ○ *Commutative: 9 + 6 + 1 = 9 + 1 + 6*
	• **Associative Property of Addition** allows for the numbers in an addition problem to be regrouped without changing the value of the problem.
	   ○ *Associative: (9 + 6) + 1 = 9 + (6 + 1)*
	• Commutative Property cannot be used for subtraction or division.
	• Commutative and Associative problems can be combined for use in the same problem.
		• Rearrange or regroup numbers in a problem to simplify and solve an addition problem.
		   ○ *Use the associative property to make tens when adding: 5 + 8 = (3 + 2) + 8 =*
		        3 + (2 + 8) = 3 + 10 = 13
		• Add in any order and check a sum by changing the order of the **addends**.

	Students will know that:	Student will be able to:
Mental Strategies 2.1.2.4	• Place value and Equality can be used to add and subtract two-digit numbers.	• Use mental strategies and **<u>algorithms (process)</u>**, to add and subtract two-digit numbers. o *Strategies include: decomposition, expanded notation and **<u>partial sums and differences</u>**. Using decomposition, 78 + 42, can be thought of as: 78 + 2 + 20 + 20 = 80 + 20 + 20 = 100 + 20 = 120. Using expanded notation, 34 – 21 can be thought of as: 30 + 4 – 20 – 1 = 30 – 20 + 4 – 1 = 10 + 3 = 13.*
2.1.1.4 Rounding	• Place value determines how a number is rounded • The digit to the right of the number being rounded determines if that number is rounded up or down. If that digit is 0 – 4, the number remains the same; if that digit is 5 – 9, the number increases by one.	• <u>Round</u> numbers up to the nearest 10 and 100 and round numbers down to the nearest 10 and 100.
Estimating 2.1.2.3	• Rounding is used when estimating. • Estimating does not produce the exact answer but a value close to it.	• <u>Estimate</u> sums and differences up to 100.
Real World 2.1.2.5	• Addition and subtraction of whole numbers can be applied to real-world situations.	• Solve real-world and mathematical addition and subtraction problems involving whole numbers with up to 2 digits or 3 digits with and without <u>regrouping</u>. • Write addition and subtraction problems horizontally and vertically. • Find the sum and difference(up to 999) of any two whole numbers. • Add and subtract three two-digit numbers with and without regrouping. • Practice doubling (adding a number to itself).
<u>Essential Vocabulary:</u> Commutative (Rearrange), Associative (Grouping), Parenthesis, Fact Family, Making Ten, Doubles Plus or Minus One, Algorithm (Process), Partial Sums and Differences, Addends, Sum, Difference, Round, Estimate, Regrouping.		
Interim 2		

<p style="text-align: center;">**Pacing Chart**</p>

<p style="text-align: center;">**Unit 2:** Addition and Subtraction</p>

Time Frame	Topic	Suggested Activities/Assessments	Resources & Text Alignment
All Units	Fluency 2.1.2.2	Rocket Math Flash Cards Games: Math War, Fast Flash, Double Bubble, Around the World, etc. www.superteacherworksheets.com www.worksheetworks.com	Rocket Math IXL
Week 11 – Week 13	Strategies 2.1.2.1	www.superteacherworksheets.com www.worksheetworks.com	PM Text Unit 2: Addition and Subtraction Chapter 1: Meanings of Addition and Subtraction Chapter 2: Addition Without Renaming Chapter 3: Subtraction Without Renaming IXL Teacher created resources
Week 14	Mental Strategies 2.1.2.4	www.superteacherworksheets.com www.worksheetworks.com	s:MathematicsResources:Grade2:PartialSums&Differences IXL
Week 15 – Week 16	2.1.1.4 Rounding	www.superteacherworksheets.com www.worksheetworks.com	PM Text IXL Teacher created resources
Week 15 – Week 16	Estimating 2.1.2.3	www.superteacherworksheets.com www.worksheetworks.com	PM Text IXL Teacher Create Resources

Week 17 – Week 18	Real World 2.1.2.5	www.superteacherworksheets.com www.worksheetworks.com	PM Text Unit 2: Addition and Subtraction Chapter 4: Addition with Renaming Chapter 5: Subtraction with Renaming IXL Teacher created resources
Week 19	Review		
Week 19	Interim 2 Assessment		

Overview

Strand(s): Number & Operation, Geometry & Measurement

Unit 3: Multiplication, Time, Rounding, Estimating, Money and Measurement

Approximate Duration of Study: 9 Weeks Between Interims.

MNSS	Knowledge	Skills
Fluency 2.1.2.2	**Students will know that:** • Addition increases a value, subtraction decreases a value • There is a relationship between addition and subtraction facts.	**Student will be able to:** • Demonstrate fluency with basic addition facts and related subtraction facts. • Achieve timed mastery of addition facts (2 seconds).
2.1.1.3 (Two- and Three-digits)	**Students will know that:** • By adding or subtracting 10 more or 10 less the digit in the tens place will increase or decrease by 1. • Groups of 10 tens must be renamed to 1 hundred • Subtracting a group of 10 may change the value in the hundreds place. o *209 – 10 = 199 and 229 – 10 = 219*	**Student will be able to:** • Find 10 more or 10 less of a given two-digit number. • Count forward and backward by tens from any given number.
Core Knowledge Multiplication	**Students will know that:** • **Multiplication** is repeated addition. • " **x** " is the symbol for multiplication (groups of). • "**Factors**" are the numbers being multiplied. • "**Product**" is the solution to a multiplication problem • Commutative property applies to multiplication. o *3 x 5 = 5 x 3* • Multiplication of whole numbers can be applied to real-world situations.	**Student will be able to:** • Find the products for multiplication facts (1 – 5) • Multiply by 0, 1, and 10. • Solve simple word problems involving multiplication. • Count by (**skip counting**) twos, threes, fives and tens.

	Students will know that:	Student will be able to:

Time 2.1.2.3	• An analog clock (clock face) can be used to measure time.
	• Time can be measured linearly.
	   ○ *Start time, and end time to find missing information and/or make decisions.*
		• Tell and determine elapsed time to five minutes.
		   ○ *If you arrived at the movie theater at 3 pm and the movie was 1 hour long, what time would the movie end?*
		   ○ *Soccer practice begins at 4 pm and lasted 45 minutes; what time did soccer practice end?*
		• Tell time to the <u>quarter-hour</u>.
		• Recognize orientation in time.
		   ○ *<u>Noon and midnight</u>.*

	• A.M. represents times after midnight to 11:59 am (<u>morning</u>). • P.M. represents times from noon to 11:59 pm (<u>afternoon/evening/night</u>).	• Distinguish between a.m. and p.m.
Core Knowledge Time and Ordinal Position	Students will know that: • The same amount of time can be written in different ways. • There are seven days in a week, 52 weeks in a year, 12 months in a year, and 365 days in year.	Student will be able to: • Identify the amount of time in given units. • Translate between units of time. ○ *365 days = 52 weeks = 12 months = 1 year.*
	• Both words and numbers can be used to represent the date, day of the week, month. • Numbers are used to represent the year.	• Identify the date, day of the week, month and year using a calendar. • Write the date using words and numbers.
	• There is a name for numerical positions.	• Write words for ordinal numbers, first to twentieth.

Money 2.3.3.2	Students will know that:
	• Coins and bills have specific values
	• Different coin combinations can sum to the same amount of money.
	   ○ *e.g. 10 pennies and 4 dimes = 2 quarters = 4 nickels and 3 dimes.*
		Student will be able to:
		• Identify and recognize relative values of <u>pennies</u>, <u>nickels</u>, <u>dimes</u>, <u>quarters</u>, and <u>dollar</u>.
		• Recognize and use dollar (**$**) and <u>cent</u> (**¢**) signs and the <u>decimal point</u>.
		• Find the value of a group of coins and determine combinations of coins that equal a given amount.
		• Show how different combinations of coins can equal the same amount of money.
		   ○ *50 cents can be made up of 2 quarters, or 4 dimes and 2 nickels, or many other combinations.*
		• Add and subtracts amounts of money.

	• Twenty 50s represent 1,000.	• Count by fifty to 1,000.
Measurements 2.3.2.1 2.3.2.2	**Students will know that:** • Non-standard units can be used measure length. • There is a relationship between the size of the unit of measurement and the number of units needed to measure the length of an object.	**Student will be able to:** • Measure lengths of objects using, paper clips, sticks, buttons, etc. Compare the amount of different units used to measure the same length. o *It will take more paper clips than whiteboard markers to measure the length of a table.*

	• Abbreviations are used for standard units of measure.
	   o **Foot: ft.**
	   o **Inch: in.**
	   o **Centimeter: cm.**
	• The relationship between length and the numbers on a ruler.
	• Know that one foot = 12 inches.
		• Use a ruler to measure length to the nearest centimeter, inch, and foot.
		• Translate between feet and inches.
		• Measure and draw **line segments** in inches to $\frac{1}{2}$ inch, and in centimeters.
		   o *Draw a line segment that is 3 inches long. Draw a line segment that is 6 centimeters long.*
		• Estimate linear measurements, then measure to check estimates.

Core Knowledge Perimeter	**Students will know that:** • The distance around an object is the **Perimeter**	**Student will be able to:** • Measure perimeter, in inches, of squares and rectangles.
Essential Vocabulary: "X", Multiplication, Product, Factor, Skip Counting, Analog Clock (Clock Face), Quarter-Hour, A.M., P.M., Noon, Midnight, Morning, Afternoon, Evening, Night, First, Second, Third, Fourth, Fifth, Sixth, Seventh, Eighth, Ninth, Tenth, Eleventh, Twelfth, Thirteenth, Fourteenth, Fifteenth, Sixteenth, Seventeenth, Eighteenth, Nineteenth, Twentieth, Dollar Sign ($), Cent (¢), Decimal Point, Penny, Nickel, Dime, Quarter, Dollar, Foot, Inch, Centimeter, Line Segment			
Interim 3		

Pacing Chart
Unit 3: Multiplication, Time, Rounding, Estimating, Money and Measurement

Time Frame	Topic	Suggested Activities/Assessments	Resources & Text Alignment
All Units	Fluency 2.1.2.2	Rocket Math Flash Cards Games: Math War, Fast Flash, Double Bubble, Around the World, etc. www.superteacherworksheets.com www.worksheetworks.com	Rocket Math IXL
Week 20 – Week 21	(Two- and Three-digits)	www.superteacherworksheets.com www.worksheetworks.com	PM Text Pg. 13 IXL Teacher created resources
Week 22 - Week 23	Core Knowledge Multiplication 2.1.1.3	www.superteacherworksheets.com www.worksheetworks.com	PM Text Unit 6: Multiplication Tables of 2s and 3s Chapter 1: Multiplication Table of 2 Chapter 2: Multiplication Table of 3 IXL Teacher created resources
Week 24 – Week 25	Time 2.1.2.3	www.superteacherworksheets.com www.worksheetworks.com	PM Text Unit 11: Time IXL Teacher created resources

Week 26	Core Knowledge Time and Ordinal Position	Game: Matching Cards www.superteacherworksheets.com www.worksheetworks.com	PM Student Text Pg. 128 IXL s:MathematicsResources:Grade2:OrdinalPositions
Week 26	Money 2.3.3.2	www.superteacherworksheets.com www.worksheetworks.com	PM Text IXL Unit 9: Money Chapter 1: Dollars and Cents Chapter 2: Adding Money Chapter 3: Subtracting Money Teacher Created Resources
Week 27	Measurements 2.3.2.1 2.3.2.2	www.superteacherworksheets.com www.worksheetworks.com	PM Text IXL Unit 3: Length Chapter 1: Measuring Length Chapter 3: Measuring Length in Centimeters s:MathematicsResources:Grade2:Measuring
Week 27	Core Knowledge Perimeter	Perimeter http://www.math-salamanders.com/perimeter-worksheets.html www.superteacherworksheets.com www.worksheetworks.com	PM Text IXL
Week 28	Review		
Week 29	Interim 3 Assessment		

Overview

Strand(s): Number & Operation, Algebra, Geometry & Measurement

Unit 4: Algebra, Fractions, Data and Geometry & Measurement

Approximate Duration of Study: 6 Weeks Between Interims.

MNSS	Knowledge	Skills
Fluency 2.1.2.2	**Students will know that:** • Addition increases a value, subtraction decreases a value • There is a relationship between addition and subtraction facts.	**Student will be able to:** • Demonstrate fluency with basic addition facts and related subtraction facts. • <mark>Achieve timed mastery of addition facts (2 seconds).</mark>

Patterns 2.2.1.1	**Students will know that:**
	• **Patterns** are found in numbers, pictures.
	• A repeated **rule** can be used to produce a set of numbers or objects that follow a pattern.
		Student will be able to:
		• Identify, extend, create, describe simple number patterns involving repeated addition and subtraction, skip counting and arrays of objects such as counters or tiles.
		    o *Skip count by 5s beginning at 3 to create the pattern 3, 8, 13, 18, ...*
		    o *Collecting 7 empty milk cartons each day for 5 days will generate the pattern 7, 14, 21, 28, 35, resulting in a total of 35 milk cartons.*
		• <mark>Identify and extend numerical and symbolic patterns.</mark>
		• Use patterns to solve problems in various contexts.

	Students will know that:	Student will be able to:

Algebra
2.2.2.1
2.2.2.2
	• Unknown values in a **number sentence** can be represented by letters.
	• Number sentences involving addition, subtraction and unknowns can be represented by real world situations and manipulatives.
	  ○ *One way to represent n + 16 = 19 is by comparing a stack of 16 connecting cubes to a stack of 19 connecting cubes; 24 = a + b can be represented by a situation involving a birthday party attended by a total 24 boys and girls.*
	• Real-world situations can be represented by number sentences that involve addition, subtraction, and unknowns.
	  ○ *How many more players are needed if a soccer team requires 11 players and so far only 6 players have arrived? This situation can be represented by the number sentence 11 – 6 = p or by the number sentence 6 + p = 11.*
	• Properties of addition and subtraction are used to find values for the unknowns that make a number sentence true.
		• Model equations using representations including manipulatives and number lines.
		• Create number sentences to match given story problems.
		• Create story problems to match given number sentences.
		• Determine the value of the letter in a number sentence.
		  ○ Solve basic word problems.
		  ○ Write and solve simple equations in the form of:
		   __ - 9 = 7; 7 + __ = 16; 4 x __ = 8.

Core Knowledge Fractions	**Students will know that:** • **Fractions** represent a part of a **whole**.	**Student will be able to:** • Recognize these fractions as part of a whole set or region and write the corresponding numerical symbols: $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}, \frac{1}{6}, \frac{1}{8}, \frac{1}{10}$. • Recognize fractions that are equal to 1.

Graphs
2.1.2.6
	Students will know that:
	• Data can be represented by:
	  ○ *Tables*
	  ○ *Bar Graphs*
	  ○ *Tally Charts*
	  ○ *Pictographs (Picture Graphs)*
		Student will be able to:
		• Use addition and subtraction to create and obtain information from **tables**, **bar graphs** and **tally charts** and **pictographs**.
		• Create and interpret simple bar graphs.
		• Record numeric data systematically and find the lowest and highest values in a data set.

	Students will know that:	Student will be able to:
Core Knowledge Weight and Capacity (Volume)	• Objects can be measured by **weight** and **capacity** (volume).	• Compare weights of objects using a **balance scale**. • Estimate and measure weight in **pounds** and know abbreviation: lb. • Estimate and measure capacity in **cups**. • Measure liquid volumes: cups, **pints**, **quarts**, **gallons**. • Compare **U.S. and metric liquid volume**: quart and **liter** (one liter is a little more than one quart).
Core Knowledge Lines and Line Segments	**Students will know that:** • **Lines** are continuous and have an arrowhead at each end, **Line Segments** have two **endpoints**. • **Horizontal** lines move from left to right. • **Vertical** lines move up and down. • **Perpendicular** lines are created when a horizontal line and vertical **intersect (cross)**. • **Parallel** lines run side by side and never intersect.	**Student will be able to:** • Name lines and line segments. o *Line AB, Segment CD.* • Identify lines as horizontal; vertical; perpendicular; parallel.
2-D and 3-D Figures 2.3.1.2 2.3.1.1	**Students will know that:** • Lines are used to describe and create **two-dimensional** geometric shapes. • Lines and **faces** are used to describe and create **three-dimensional** geometric shapes. • Two- and three-dimensional figures can be classified by the number of sides, **vertices**, faces and **edges**.	**Student will be able to:** • Identify, name and draw basic **plane** figures: squares, circles, triangles, rectangles, trapezoids, hexagons. • Identify and name cubes, rectangular prisms, cones, cylinders, spheres and pyramids. • Associate solid figures with planar shapes: sphere (circle), cube (square), pyramid (triangle). • Describe, compare and classify two- and three-dimensional figures according to number of sides, number and shape of faces and the, edges, and vertices (corners). • Distinguish between square and rectangle according to length of sides o *A square has sides of equal length.*

	Students will know that:	Student will be able to:
Core Knowledge Congruency and Symmetry	• **Congruent** shapes are exactly (identical) the same in shape and size. • **Lines of symmetry** divide a shape into congruent parts.	• Make congruent shapes and designs. • Identify line of symmetry, and create simple **symmetric figures.**
Core Knowledge Temperature	Students will know that: • **Temperature** can be measured in **Fahrenheit**. • Know the degree sign: °	Student will be able to: • Measure and record temperature in degrees Fahrenheit to the nearest 2 degrees.

Essential Vocabulary: Pattern, Rule, Number Sentence, Fraction, Whole, Numerator, Denominator, Tables, Bar Graphs, Tally Charts, Pictograph, Weight, Capacity, Balance Scale, Pounds, Cups, Pints, Gallons, U.S. and Metric Liquid Volume: Quarts, Liters, Horizontal, Vertical, Perpendicular, Parallel, Intersect, Line, Line Segment, Endpoints, Two-Dimensional, Three-Dimensional, Vertex, Face, Edge, Plane, Congruent, Line of Symmetry, Symmetric Figures, Temperature, Fahrenheit.

Interim 4

Pacing Chart
Unit 4: Algebra, Fractions, Data and Geometry & Measurement

Time Frame	Topic	Suggested Activities/Assessments	Resources & Text Alignment
All Units	Fluency 2.1.2.2	Rocket Math Flash Cards Games: Math War, Fast Flash, Double Bubble, Around the World, etc. www.superteacherworksheets.com www.worksheetworks.com	Rocket Math IXL
Week 30	Patterns 2.2.1.1	s:MathematicsResources:Grade2:NumberPatterns s:MathematicsResources:Grade2:Number&PicturePatterns www.superteacherworksheets.com www.worksheetworks.com	IXL
Week 30	Algebra 2.2.2.1 2.2.2.2	www.superteacherworksheets.com www.worksheetworks.com	IXL Teacher created resources
Week 31	Core Knowledge Fractions	www.superteacherworksheets.com www.worksheetworks.com	PM Text Unit 10: Fractions Chapter 1: Half and Quarters Chapter 2: Writing Fraction IXL
Week 32	Graphs 2.1.2.6	www.superteacherworksheets.com www.worksheetworks.com	PM Text Unit 13: Tables and Graphs Chapter 1: Picture Graphs Chapter 2: Bar Graphs IXL

Week 33	Core Knowledge Weight and Capacity (Volume)	www.superteacherworksheets.com www.worksheetworks.com	PM Text Unit 12: Capacity Need more resources IXL
Week 33	Core Knowledge Lines and Line Segments	www.superteacherworksheets.com www.worksheetworks.com	IXL
Week 34	2-D and 3-D Figures 2.3.1.2 2.3.1.1	www.superteacherworksheets.com www.worksheetworks.com	PM Text Unit 14: Geometry IXL
Week 35	Core Knowledge Congruency and Symmetry	www.superteacherworksheets.com www.worksheetworks.com http://www.math-salamanders.com/image-files/math-worksheets-3rd-grade-the-alphabet-in-symmetry.gif	IXL s:MathematicsResources:Grade2:Symmetry
Week 35	Core Knowledge Temperature	www.superteacherworksheets.com www.worksheetworks.com	IXL
Week 36	Interim 4		

Unit 4