

*Mendham Township
Math Curriculum
Grade 3*

<i>Learning Outcome</i>	<i>CCSS</i>	<i>Resources</i>
<i>1st Quarter</i>	<i>Domain</i>	
<p>Chapter 1—Addition and Subtraction Within 1000</p> <ul style="list-style-type: none"> • Identify and describe whole number patterns and solve problems. • Round 2- and 3-digit numbers to the nearest ten or hundred. • Use compatible numbers and rounding to estimate sums. • Count by tens and ones, use a number line, make compatible numbers, or use friendly numbers to find sums mentally. • Use the Commutative and Associative Properties of Addition to add more than two addends. • Use the break-apart strategy to add three-digit numbers. • Use place value to add 3-digit numbers • Use compatible numbers and rounding to estimate differences. • Use a number line, friendly numbers, or break-apart strategy to find differences mentally. • Use place value to subtract 3-digit numbers. • Use the combine place values strategy to subtract 3-digit numbers. • Solve addition and subtraction problems by using the strategy <i>draw a diagram</i>. 	<p>Number and Operations Base Ten CC.3.NBT.1 CC.3.NBT.2</p> <p>Operations & Algebraic Thinking CC.3.OA.8 CC.3.OA.9</p>	<p>HMH GO MATH Chapter 1 Lessons 1.1-1.12</p>
<p>Chapter 2 – Represent and Interpret Data</p> <ul style="list-style-type: none"> • Organize data in tables, and solve problems using the strategy <i>make a table</i>. • Read and interpret data in a scaled picture graph. • Draw a scaled picture graph to show data in a table. • Read and interpret data in a scaled bar graph. • Draw a scaled bar graph to show data in a table or picture graph. • Solve one- and two- step compare problems using data represented in scaled bar graphs. • Read and interpret data in a line plot and use data to make a line plot. 	<p>Measurement and Data CC.3.MD.3 C.C.3.MD.4</p>	<p>HMH GO MATH Chapter 2 Lessons 2.1-2.7</p>

<p>Chapter 3 – Understand Multiplication</p> <ul style="list-style-type: none"> • Model and skip count objects in equal groups to find how many there are. • Write an addition sentence and multiplication sentence for a model. • Model and skip count on a number line to find how many there are. • Solve one- and two-step problems by using the strategy <i>draw a diagram</i>. • Use arrays to model products and factors. • Model the Commutative Property of Multiplication and use it to find products. • Model multiplication with the factors 1 and 0. 	<p>Operations & Algebraic Thinking CC.3.OA.1 CC.3.OA.3 CC.3.OA.5 CC.3.OA.7 CC.3.OA.8</p> <p>Number and Operations Base Ten CC.3.NBT.2</p>	<p>HMH GO MATH Chapter 3 Lessons 3.1-3.7</p>
<p>Chapter 4— Multiplication Facts and Strategies</p> <ul style="list-style-type: none"> • Draw a picture, count by 2’s or use doubles to multiply with the factors 2 and 4. • Use skip counting, a number line, or bar model to multiply with the factors 5 and 10 • Draw a picture, use 5’s facts and addition, doubles, or a multiplication table to multiply with the factors 3 and 6. • Use the Distributive Property to find products by breaking apart arrays. • Use the Commutative or Distributive Property or known facts to multiply with the factor 7. • Use the Associative Property of Multiplication to multiply with three factors. • Identify and explain patterns on the multiplication table. • Use doubles, a number line, or the Associative Property of Multiplication to multiply with the factor of 8. • Use the Distributive Property with addition or subtraction or patterns to multiply with the factor 9. • Solve multiplication problems by using the strategy <i>make a table</i>. 	<p>Operations & Algebraic Thinking CC.3.OA.1 CC.3.OA.3 CC.3.OA.4 CC.3.OA.5 CC.3.OA.7 CC.3.OA.8 CC.3.OA.9</p>	<p>HMH GO MATH Chapter 4 Lessons 4.1-4.10</p>
<p><i>2nd Quarter</i></p>	<p><i>Domain</i></p>	
<p>Chapter 5– Use Multiplication Facts</p> <ul style="list-style-type: none"> • Identify and describe a number pattern shown in a function table. • Use an array or a multiplication table to find an unknown factor. • Solve multiplication problems by using the strategy <i>draw a diagram</i>. • Use base-ten blocks, a number line, or place value to multiply with multiplies of 10. • Model and record multiplication with multiples of 10. 	<p>Operations & Algebraic Thinking CC.3.OA.1 CC.3.OA.3 CC.3.OA.4 CC.3.OA.5 CC.3.OA.7 CC.3.OA.9</p>	<p>HMH GO MATH Chapter 5 Lessons 5.1-5.5</p>

	Number and Operations Base Ten CC.3.NBT.3	
<p>Chapter 6 – Understand Division</p> <ul style="list-style-type: none"> • Solve division problems by using the strategy <i>act it out</i>. • Use models to explore the meaning of partitive (sharing) division. • Use models to explore the meaning of quotative (measurement) division. • Model division by using equal groups and bar models. • Use repeated subtraction and a number line to relate subtraction to division. • Model division by using arrays. • Use bar models and arrays to relate multiplication and division as inverse operations. • Write related multiplication and division facts. • Divide using the rules for 1 and 0. 	Operations & Algebraic Thinking CC.3.OA.2 CC.3.OA.3 CC.3.OA.4 CC.3.OA.5 CC.3.OA.6 CC.3.OA.7	<p>HMH GO MATH Chapter 6 Lessons 6.1-6.9</p>
<p>Chapter 7 – Division Facts and Strategies</p> <ul style="list-style-type: none"> • Use models to represent division by 2. • Use repeated subtraction, a number line, or a multiplication table to divide by 10. • Count up by 5's, count back on a number line, or use 10s facts and doubles to divide by 5. • Use equal groups, a number line, or a related multiplication fact to divide by 3. • Use an array, equal groups, factors, or a related multiplication fact to divide by 4. • Use equal groups, a related multiplication fact, or factors to divide by 6. • Use an array, a related multiplication fact, or equal groups to divide by 7. • Use repeated subtraction, a related multiplication fact, or a multiplication table to divide by 8. • Use equal groups, factors, or a related multiplication fact to divide by 9. • Solve two-step problems by using the strategy <i>act it out</i>. • Perform operations in order when there are no parentheses. 	Operations & Algebraic Thinking CC.3.OA.1 CC.3.OA.2 CC.3.OA.3 CC.3.OA.4 CC.3.OA.5 CC.3.OA.6 CC.3.OA.7 CC.3.OA.8	<p>HMH GO MATH Chapter 7 Lessons 7.1-7.11</p>

<i>3rd Quarter</i>	<i>Domain</i>	
<p>Chapter 8 – Understand Fractions</p> <ul style="list-style-type: none"> • Explore and identify equal parts of a whole. • Divide models to make equal shares. • Use a fraction to name one part of a whole that is divided into equal parts. • Read, write, and model fractions that represent more than one part of a whole that is divided into equal parts. • Represent and locate fractions on a number line. • Relate fractions and whole numbers expressing whole numbers as fractions and recognizing fractions that are equivalent to whole numbers. • Model, read, and write fractional parts of a group. • Find fractional parts of a group using unit fractions. • Solve fraction problems by using the strategy <i>draw a diagram</i>. 	<p>Number and Operations- Fractions CC.3.NF.1 CC.3.NF.2a CC.3.NF.2b CC.3.NF.3c</p> <p>Geometry CC.3.G.2</p>	<p>HMH GO MATH Chapter 8 Lessons 8.1-8.9</p>
<p>Chapter 9 – Compare Fractions</p> <ul style="list-style-type: none"> • Solve comparison problems by using the strategy <i>act it out</i>. • Compare fractions with the same denominator by using models and reasoning strategies. • Compare fractions with the same numerator by using models and reasoning strategies. • Compare fractions by using models and strategies involving the size of pieces in the whole. • Compare and order fractions by using models and reasoning strategies. • Model equivalent fractions by folding paper, using area models, and using number lines. • Generate equivalent fractions by using models. 	<p>Number and Operations- Fractions CC.3.NF.1 CC.3.NF.2b CC.3.NF.3</p> <p>Geometry CC.3.G.2</p>	<p>HMH GO MATH Chapter 9 Lessons 9.1-9.7</p>
<p>Chapter 10– Time, Length, Liquid Volume, and Mass</p> <ul style="list-style-type: none"> • Read, write, and tell time on analog and digital clocks to the nearest minute. • Decide when to use A.M. and P.M. when telling time to the nearest minute. • Use a number line or an analog clock to measure time intervals in minutes. • Use a number line or an analog clock to add or subtract time intervals to find starting times or ending times. • Solve problems involving addition and subtraction of time intervals by using the strategy <i>draw a diagram</i>. 	<p>Operations & Algebraic Thinking CC.3.OA.7 CC.3.OA.8</p> <p>Measurement and Data CC.3.MD.1 CC.3.MD.2</p>	<p>HMH GO MATH Chapter 10 Lessons 10.1-10.9</p>

<ul style="list-style-type: none"> • Measure length to the nearest half or quarter inch and use measurement data to make a line plot. • Estimate and measure liquid volume in liters. • Estimate and measure mass in grams and kilograms. • Add, subtract, multiply, or divide to solve problems involving liquid volumes or masses. 	<p>CC.3.MD.4</p> <p>Number and Operations Base Ten CC.3.NBT.2</p>	
<p>Chapter 11 – Perimeter and Area</p> <ul style="list-style-type: none"> • Explore perimeters of polygons by counting units on grid paper. • Estimate and measure perimeter of polygons using inch and centimeter rulers. • Find the unknown length of a side of a polygon when you know its perimeter. • Explore perimeter and area as attributes of polygons. • Estimate and measure area of plane shapes by counting unit squares. • Relate area to addition and multiplication using area models. • Solve area problems by using the strategy <i>find a pattern</i>. • Apply the Distributive Property to area models and to find the area of combined rectangles. • Compare areas of rectangles that have the same perimeter. • Compare perimeters of rectangles that have the same area. 	<p>Measurement and Data CC.3.MD.4 CC.3.MD.5 CC.3.MD.6 CC.3.MD.7 CC.3.MD.8</p> <p>Operations & Algebraic Thinking CC.3.OA.3 CC.3.OA.5 CC.3.OA.7 CC.3.OA.9</p> <p>Number and Operations Base Ten CC.3.NBT.2</p>	<p>HMH GO MATH Chapter 11 Lessons 11.1-11.10</p>

<i>4th Quarter</i>	<i>Domain</i>	
<p>Chapter 12 – Two-Dimensional Shapes</p> <ul style="list-style-type: none"> • Identify and describe attributes of plane shapes. • Describe angles in plane shapes. • Identify polygons by the number of sides they have. • Determine if lines or line segments are intersecting, perpendicular, or parallel. • Describe, classify, and compare quadrilaterals based on their sides and angles. • Draw quadrilaterals. • Describe and compare triangles based on the number of sides that have equal length by their angles. • Solve problems by using the strategy <i>draw a diagram</i> to classify plane shapes. • Partition shapes into parts with equal areas and express the area as a unit fraction of the whole. 	<p>Measurement and Data CC.3.MD.5</p> <p>Number and Operations-Fractions CC.3.NF.1 CC.3.NF.3d</p> <p>Geometry CC.3.G.1 CC.3.G.2</p>	<p>HMH GO MATH Chapter 12 Lessons 12.1-12.9</p>

Getting Ready for Grade 4

- Represent and write numbers to ten thousand using combinations of thousands, hundreds, tens, and ones.
- Use place value to read and write numbers to ten thousand.
- Represent whole numbers to ten thousands on a number line.
- Use models and place value to compare numbers to ten thousand.
- Use strategies such as break apart and array, find a pattern, or use a double to multiply with 11 and 12.
- Use multiplication or repeated subtraction to divide with 11 and 12.
- Use the inverse relationship of multiplication and division to write related equations.
- Use a basic fact and a pattern to multiply with 10, 100, and 1000.
- Use base-ten blocks and area models to model multiplication with a 2-digit factor.
- Use counters to model division with remainders.
- Use base-ten blocks to model division with a 2-digit quotient.
- Model and write fractions in tenths and hundredths.
- Model, read, and write fractions greater than one.
- Model equivalent fractions using area models.
- Use a multiplication table to generate equivalent fractions.
- Identify shapes that have the same size and same shape.
- Change customary units of length from larger units to smaller units.
- Change metric units of length from larger units to smaller units.
- Estimate and measure liquid volume in customary units.
- Estimate and measure weight in ounces and pounds.

Operations & Algebraic Thinking
CC.3.OA.7

Number and Operations Base Ten
CC.2.NBT.1a
CC.2.NBT.2
CC.2.NBT.3
CC.2.NBT.4
CC.3.NBT.3
CC.4.NBT.1
CC.4.NBT.2
CC.4.NBT.5
CC.4.NBT.6

Number and Operations-Fractions
CC.3.NF.1
CC.3.NF.3b
CC.4.NF.1
CC.4.NF.3b
CC.4.NF.6

Measurement and Data
CC.2.MD.3
CC.3.MD.2
CC.4.MD.1

Geometry
CC.3.G.1
CC.4.G.3

**HMH GO MATH
Review and Enrich
Chapters
Lessons 1-20**