3rd Grade Curriculum Guide – 2022-2023

3rd Grade BIG-M **Transition Guide**

Mathematical Thinking and Reasoning Standards

Key:

*Time frame Includes two days for assessment.

Yellow highlight: New grade level content benchmark

Blue highlight: Materials to be pulled from 4th grade

(FD) Foundational Benchmark, Exploration (E), Procedural Reliability (PR), Procedural Fluency (PF), Recall/Automaticity (R)

Benchmarks	Learning Targets	NOT Aligned Go Math! Lessons	Suggested Time Frame (Includes two Assessment days)
MA.3.NSO.1.1 (R) MA.3.NSO.1.3 (R) MA.3.NSO.1.4 (R) MA.3.NSO.2.1 (R) MA.3.AR.1.2 (PR) MA.3.AR.3.3 (PR)	**Whole Number Operations (**Go Math! Ch. 1) Addition and Subtraction Within 1,000 • Identify and describe whole-number patterns and solve problems using ordinal numbers (1st; 2nd; 3rd....) to describe the position of a number in a sequence. • Round 2- and 3-digit numbers to the nearest ten or hundred. • Use compatible numbers and rounding to estimate sums and differences. • Use a variety of strategies/methods to find sums and differences mentally. • Use the Commutative and Associative Properties of Addition to add more than two addends. • Use a variety of strategies/methods to add and subtract 3-digit numbers. • Understand the context of the problem, as well as the quantities, when solving addition and subtraction problems using the strategy draw a diagram.		**14 days
Notes:	MA.3.AR.3.1 practice using vocabulary "even" or "odd" in the class. MA.3.NSO.1.2- Can be addressed in this chapter as it focuses on four-digit numbers. Allow two days for 1.11 and 1.12 each. Purpose and instructional strategies can be found on pp. **13-18; 55-58; & 72-74** in the 3rd Grade B1G-M		
Additional Resources:	**Manipulatives:** Hundreds chart • Place value chart • Number cards • Number lines • Base ten blocks • Pattern blocks • Two-color counters • Connecting cubes • Objects for counting (e.g., beans, coins) • Playing cards		
	Literature: Coyotes All Around by Stuart Murphy • 365 Penguins by Jean Luc Fromental • The 512 Ants on Sullivan Street by Carol Losi & Patrick Merill • Math-terpieces by Greg Tang • Panda Math by Ann Nagd		

Benchmarks	Learning Targets	NOT Aligned Go Math! Lessons	Suggested Time Frame (Includes two Assessment days)
MA.3.DP.1.1 (PF) MA.3.DP.1.2 (PR)	**Represent and Interpret Data** *(Go Math! Ch. 2)* • Collect, represent and interpret data using tables, scaled pictographs, scaled bar graphs, circle graphs, or line plots • Solve one- and two-step compare problems using data represented in scaled bar graphs. • Use and make line plots.		**9 Days
Notes:	Combine Lesson 2.4 and 2.5 Purpose and instructional strategies can be found on pp. **111-117** in the 3rd Grade B1G-M		
Additional Resources:	**Manipulatives:** Color tiles • Color cubes • Grid paper • Rulers • Bar graphs • Circle graphs • Pictographs • Dot paper		
	Literature: The Fly on the Ceiling by Julie Glass • Let's Make a Bar Graph by Robin Nelson • Line, Bar, and Circle Graphs by Claire Piddoc • The Great Graph Contest by Loreen Ledy • Tally O'Malley by Stuart Murphy • Lemonade for Sale by Stuart Murphy		

Benchmarks	Learning Targets	NOT Aligned Go Math! Lessons	Suggested Time Frame (Includes two Assessment days)
MA.3.NSO.2.2(PR) MA.3.AR.2.1 (PR)	**Understand Multiplication** *(Go Math! Ch. 3)* • Model and skip count objects in equal groups or on a number line to find how many there are. • Write an addition sentence and a multiplication sentence for a model. • Understand the context of the problem, as well as the quantities, when solving one- and two-step problems by using the strategy *draw a diagram*. • 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. • Relate area to the operations of multiplication and addition. • Find the area of a rectangle with whole-number side lengths by tiling it and show that the area is the same as would be found by multiplying the side lengths.		**13 Days
Notes:	~Focus on the "jumps" being "groups" and associate a multiplication equation with each problem. (3.3) ~ Understand Area and Relate to Multiplication *(Go Math! Ch. 11.6) MA.3.GR.2.2* Purpose and instructional strategies can be found on pp. **159-62** in the 3rd Grade B1G-M		
Additional Resources:	**Manipulatives:** Hundreds chart • Place value chart • Multiplication chart • Two-color counters • Base-ten blocks • Color tiles • Connecting cubes • Grid paper • Math balances		
	Literature: Six-Dinner Sid by Inga Moore • Sea Squares by Joy Hulme • The Grapes of Math by Greg Tang • Each Orange Had 8 Slices by Paul Giganti, Jr. and Donald Crews • The Hershey's Multiplication Book by Jerry Pallotta • The Best of Times by Greg Tang • 7 x 9 = Trouble by Claudia Mills • Amanda Bean's Amazing Dream by Cindy Neuschwander • 2 x 2 = Boo! by Loreen Leedy • Math Attack! by Joan Horton & Krysten Brooker • The King's Chessboard by David Birch & Devis Grebu • Ten Times Better by Richard Michelson • One Hundred Hungry Ants by Elinor Pinczes • One Hungry Cat by Joanne Rocklin & Rowane Murphy		

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MA.3.NSO.2.4 (PR) MA.3.AR.1.1 (FD) MA.3.AR.1.2 (PR) MA.3.AR.3.3 (PR)	**Multiplication Facts and Strategies** *(Go Math! Ch. 4)* • Use a variety of strategies/methods to multiply with the factors from 0 to 12. • Use the Distributive Property to find products of one-digit and two-digit numbers by breaking apart arrays. • Use the Associative Property of Multiplication to multiply with three factors. • Identify, explain, and extend patterns on the multiplication table. Understanding the context of the problem, as well as the quantities, when solving multiplication problems by using the strategy *make a table*.		**10 Days
Notes:	• MA.3.AR.3.2- Use Go Math 4th Grade 5.4 to deepen understanding of multiples and expose students to using factors. •MA.3.AR.2.2 Determine and explain whether an equation involving multiplication or division is true or false. ~Combine Lesson 2.4 and 2.5 Purpose and instructional strategies can be found on pp. **33-36; 62-64; &70-71** in the 3rd Grade B1G-M		
Additional Resources:	**Manipulatives:** Hundreds chart • Place value chart • Multiplication chart • Two-color counters • Base-ten blocks • Color tiles • Connecting cubes • Grid paper • Math balances		
	Literature: Six-Dinner Sid by Inga Moore • Sea Squares by Joy Hulme • The Grapes of Math by Greg Tang • Each Orange Had 8 Slices by Paul Giganti, Jr. and Donald Crews • The Hershey's Multiplication Book by Jerry Pallotta • The Best of Times by Greg Tang • 7 x 9 = Trouble by Claudia Mills • Amanda Bean's Amazing Dream by Cindy Neuschwander • 2 x 2 = Boo! by Loreen Leedy • Math Attack! by Joan Horton & Krysten Brooker • The King's Chessboard by David Birch & Devis Grebu • Ten Times Better by Richard Michelson • One Hundred Hungry Ants by Elinor Pinczes • One Hungry Cat by Joanne Rocklin & Rowane Murphy		

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MA.3.AR.1.1 (PR) MA.3.AR.2.1 (PR) MA.3.AR.3.3 (PR) MA.3.NSO.2.3(PR)	**Use Multiplication Facts** *(Go Math! Ch. 5)* • Identify, describe, and extend number patterns shown in a function table. • Use an array or a multiplication table to find an unknown factor. • Use base-ten blocks, a number line, or place value to multiply with multiples of 10, up to 90, or a multiple of 100, up to 900. • Model and record multiplication with multiplication of10. • Understanding the context of the problem, as well as the quantities, when solving multiplication problems by using the strategy *draw a diagram*.		**6 Days
Notes:	Purpose and instructional strategies can be found on pp. **30-33 & 55-58** in the 3rd Grade B1G-M		
Additional Resources:	**Manipulatives:** Hundreds chart • Place value chart • Multiplication chart • Two-color counters • Base-ten blocks • Color tiles • Connecting cubes • Grid paper • Math balances		
	Literature: Six-Dinner Sid by Inga Moore • Sea Squares by Joy Hulme • The Grapes of Math by Greg Tang • Each Orange Had 8 Slices by Paul Giganti, Jr. and Donald Crews • The Hershey's Multiplication Book by Jerry Pallotta • The Best of Times by Greg Tang • 7 x 9 = Trouble by Claudia Mills • Amanda Bean's Amazing Dream by Cindy Neuschwander • 2 x 2 = Boo! by Loreen Leedy • Math Attack! by Joan Horton & Krysten Brooker • The King's Chessboard by David Birch & Devis Grebu • Ten Times Better by Richard Michelson • One Hundred Hungry Ants by Elinor Pinczes • One Hungry Cat by Joanne Rocklin & Rowane Murphy		

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MA.3.NSO.2.2(R) MA.3.AR.1.1 (FD) MA.3.AR.1.2 (PR) MA.3.AR.2.1 (PR)	**Division** *(Go Math! Ch. 6)* • Understanding the context of the problem, as well as the quantities, when solving division problems by using the strategy *act it out*. • Use models to explore the meaning of partitive (sharing) and quantitative (measurement) division. • Use repeated subtraction and a number line to relate subtraction to division. • Relate multiplication and division as inverse operations. Write and restate related multiplication and division facts. Divide using the rules for 1 and 0.		**15 Days
Notes:	Purpose and instructional strategies can be found on pp. **55-61** in the 3rd Grade B1G-M		
Additional Resources:	**Manipulatives:** Two-color counters • Hundreds chart • Multiplication chart • Place value chart • Base-ten blocks • Color tiles • Grid paper • Number lines		
	Literature: The Doorbell Rang by Pat Hutchins • *Divide and Ride by Stuart J Murphy • The Great Divide by Dayle Ann Dodds • The Multiplying Menace Divides by Pam Calvert • Bean Thirteen by Matthew McElligott • A Remainder of One by Elinor Pinezez		

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MA.3.NSO.2.2(R) MA.3.AR.1.1 (FD) MA.3.AR.1.2 (PR) MA.3.AR.2.1 (PR)	Division Facts and Strategies (Go Math! Ch. 7) • Use a variety of strategies/methods to divide by 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. • Understanding the context of the problem, as well as the quantities, when solving two-step problems by using the strategy act it out.		**11 Days
Notes:	~Combine lessons (7.1 &7.5); (7.2 & 7.3); (7.4 &7.6) and (7.7& 7.8) ~ Allow two days for 7.9 ~Use Divisibility Rules Worksheet deepen understanding of division. Use Go Math 4th Grade 5.2 as a resource. Purpose and instructional strategies can be found on pp. **55-61** in the 3rd Grade B1G-M		
Additional Resources:	**Manipulatives:** Two-color counters • Hundreds chart • Multiplication chart • Place value chart • Base-ten blocks • Color tiles • Grid paper • Number lines		
	Literature: The Doorbell Rang by Pat Hutchins • *Divide and Ride by Stuart J Murphy • The Great Divide by Dayle Ann Dodds • The Multiplying Menace Divides by Pam Calvert • Bean Thirteen by Matthew McElligott • A Remainder of One by Elinor Pinezez		

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MA.3.FR.1.1 (FD) MA.3.FR.1.2 (E)	**Fractions Understand Fractions** *(Go Math! Ch. 8)* •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. •Use a fraction to name more than one part of a whole that is divided into equal parts. Geometry (Go Math! Ch. 12.9) •Partition shapes into parts with equal areas and express the area as a unit fraction of the whole. •Represent and locate fractions on a number line. •Relate fractions and whole numbers by expressing whole numbers as fractions and recognizing fractions that are equivalent to whole numbers. •Model, read, write, and find fractional parts of a group. •Find fractional parts of a group using unit fractions. •Solve fraction problems by using the strategy draw a diagram.		**15 Days
Notes:			
Additional Resources:	**Manipulatives:** Fraction area models (circular and rectangular) • Fraction strips/bars • Grid paper • Two-color counters • Pattern blocks • Number lines		
	Literature: Fraction Action by Loreen Leedy • Fraction Fun by David Adler • Pizza Fractions by Jerry Pollatta • Whole-y Cow! by Taryn Souders • The Lion's Share by Matthew McElligott • Working with Fractions by David Adler • The Wishing Club by Donna Jo Napoli • Go Fractions by Judith Stamper • *Apple Fractions by Jerry Pallotta		

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MA.3.FR.1.3 (FD) MA.3.FR.2.1 (PR) MA.3.FR.2.2 (PR)	**Compare Fractions** *(Go Math! Ch. 9)* • Solve comparison problems by using the strategy act it out. • Plot, order, and compare fractions with the same denominator or with the same numerator by using models and reasoning strategies. • Model equivalent fractions by folding paper, using area models, and using number lines and generate equivalent fractions by using models		**8 days
Notes:	~ Allow 2 days for 9.1.		
Additional Resources:	**Manipulatives:** Fraction area models (circular and rectangular) • Fraction strips/bars • Grid paper • Two-color counters • Pattern blocks • Number lines		
	Literature: Fraction Action by Loreen Leedy • Fraction Fun by David Adler • Pizza Fractions by Jerry Pollatta • Whole-y Cow! by Taryn Souders • The Lion's Share by Matthew McElligott • Working with Fractions by David Adler • The Wishing Club by Donna Jo Napoli • Go Fractions by Judith Stamper • *Apple Fractions by Jerry Pallotta		

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MA.3.GR.1.1 (R) MA.3.GR.1.2 (PF) MA.DP.1.1 (PF) MA.3.M.1.1 (R) MA.3.M.2.1 (PR) MA.3.M.1.2 (PR)	**Measurement Time, Length, Liquid Volume, and Mass** *(Go Math! Ch.10 3rd **and 4th Grade**)* Read, write, and tell time on analog and digital clocks to the nearest minute and decide when to use A.M. and P.M. • Use a number line or an analog clock to measure time intervals in minutes and 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 draw a diagram. • Measure length to the nearest centimeter, half or quarter inch and use measurement data to make a line plot. • Estimate and measure liquid volume in liters and cups and mass in grams and kilograms. • Solve problems involving liquid volumes or masses and temperature.		*Allow 15 days
Notes:	Use 4th Grade Chapter 10 Lesson 10.1, 10.3, 10.4, (10.5 &10.6 together) to teach new Geometric Reasoning Standards. Teach 3rd Grade 10.4 and 10.5 together. Purpose and instructional strategies can be found on pp. **79-80 & 87-94** in the 3rd Grade B1G-M		
Additional Resources:	**Manipulatives:** Common objects to weigh/measure (e.g., paper clips, pencils, crayons, books, paper, plants, erasers) • Containers to fill (e.g., cups, beakers, boxes, liters) • Color tiles • Color cubes • Student clocks (Judy) • Rulers • Yardsticks • Meter sticks • Balances • Number lines		
	Literature: The Dog is a Paw a Foot? by Kris Hirschmann • Inch by Inch by Leo Lionni • Jim and the Beanstalk by Raymond Briggs • Measuring Penny by Loreen Leedy • Millions to Share by David, Schwartz • Just a Minute by Teddy Slater • What Time is it, Mr. Crocodile? by Judy Sierra • *How Big is a Foot by Rolf Myller • *The Grouchy Ladybug by Eric Carle		

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MA.3.GR.2.1 (E) MA.3.GR.2.2 (PR) MA.3.GR.2.3 (PR) MA.3.GR.2.4 (FD)	**Perimeter and Area of Combined Rectangles** *(Go Math! Ch.11)* • Solve real-world problems involving the perimeter and area of rectangles with whole-number side lengths using a visual model and a formula. • Estimate, measure, and find perimeter and area of polygons. • Find the unknown length of a side of a polygon when you know its perimeter. • Explore perimeter and area as attributes of polygons. • Apply the Distributive Property to find the area of combined rectangles. • Compare rectangles that have the same perimeter or have the same area.		*Allow 10 days After Lesson 7, complete 4th grade lesson 13.2
Notes:	After Lesson 7, complete 4th grade lesson 13.2 Purpose and instructional strategies can be found on pp. **100-106** in the 3rd Grade B1G-M		
Additional Resources:	**Manipulatives:** Color tiles • Dot paper • Geoboards and Geobands (rubberbands) Grid paper • Rulers • Yardsticks • Meter sticks		
	Literature: Spaghetti and Meatballs for All by Marilyn Burns		

Benchmarks	Learning Targets	NOT Aligned Go Math! Lessons	Suggested Time Frame (Includes two Assessment days)
MA.3.GR.1.2 (PF)	**Geometry Two-Dimensional Shapes** *(Go Math! Ch.12)* • Identify and describe attributes of plane shapes. • Describe angles and line segments in plane shapes. • Describe, classify, and compare quadrilaterals based on their sides and angles and draw quadrilaterals. • Describe and compare triangles based on the number of sides that have equal length and by their angles. • Partition shapes into parts with equal areas and express the area as a unit fraction of the whole.		*Allow 10 days
Notes:	Combine lessons 12.1 and 12.2		
Additional Resources:	**Manipulatives:** Geoboards and Geobands (rubber bands) • Pattern blocks • Tangram • Attribute blocks		
	Literature: The Greedy Triangle by Marilyn Burns • Grandfather Tang's Story by Ann Tomper • The Silly Story of Goldie Locks and the Three Squares by Grace Maccarone • Shape by Shape by Suse MacDonald • If You Were a Polygon by Marcie Aboff • I Spy Shapes in Art by Lucy Micklethwait		