

3rd Grade Challenge Math Curriculum Map (Updated 05-13-20)

Unit 2-Adding and Subtracting Whole Numbers

EM Lesson Unit 2	Journal Pages	Games	Enrichments	Copies
2.1 Fact Families		Roll to 100**		HL MM 38 MM 456 (Roll to 100)
2.2 Extension of + and - Facts		Name That Number**		HL MM 40
2.3 What's my Rule		Beat the Calculator** Subtraction Top-It	What's My Rule?	HL MM 42 Enrichment MM 41
2.4 Parts and Total Number Stories				HL MM 43
2.5 Change Number Stories		Number Grid Difference**		HL MM 46
2.6 Comparison Number Stories				HL MM 51
2.7 Partial Sums Algorithm		Target: 50**		HL MM 52 MM 465 (Target: 50)
2.8 Subtraction Algorithms (2-Day Lesson)		Number Grid Difference		HL MM 54 MM 454 (Number Grid Difference)
2.9 Addition with Three or More Addends		Name That Number	Addition and Subtraction Puzzles	Enrichment MM 58-59 (B2B) HL MM 56-57
Star Test Review Unit Test				Star Test Review Unit Test

**** Hit basic facts HARD****

Unit 2 Games:

** Denotes initial introduction of the game.

Order 200 copies of each game board.

Problem Driven Math 5:

3, 10, 21

Additional Activities:

Diffy Boxes

Math Quest Problem Solving Strategies (Practice A and B)

Vocabulary Packet

Perplexors (Optional)

Unit 3-Linear Measures and Area

EM Lesson Unit 3	Journal Pages	Games	Enrichments	Copies
3.1 A "Class Shoe" Unit of Length				
3.2 Measuring with a Ruler		Addition Top-It		MM 413
3.3 Standard Linear Measures (2-Day Lesson)			<u>Counting on Frank</u> by Rod Clement	
3.4 Perimeter			Exploring Perimeter	Enrichment MM 416 HL MM 68 (single sided)
3.5 A Pattern Block Toss Experiment				HL MM 69
EXPLORATIONS 3.6 Exploring Perimeter & Area (2-Day Lesson)	<i>Exploration A: Geoboard Perimeters</i> <i>Exploration B: Tiling with Pattern Blocks</i>			MM 415
3.7 Area		Subtraction Top-It	Exploring Area	Enrichment MM 73 HL MM 72
3.8 Number Models for Area			Finding and Comparing Areas	Enrichment MM 76 and 418 HL MM 74 MM 417 MM 75
3.9 Diameter & Circumference			<u>Sir Cumference and the First Round Table</u> by Cindy Neuschwander	MM 77-78 (use tape measure)
Star Test Review Unit Test				Star Test Review Unit Test

Unit 3 Games:

** Denotes initial introduction of the game.

Order 200 copies of each game board.

Problem Driven Math 5:

8, 32, 33, 34, 35, 36

Additional Activities:

Math Quest Problem Solving Strategies (Practice A and B)

CML Problems

CML Explanation Sheet

Vocabulary Packet

Perplexors (Optional)

Unit 4-Multiplication and Division

EM Lesson Unit 4	Journal Pages	Games	Enrichments	Copies
4.1 Multiples of Equal Groups			<u>Each Orange Has Eight Slices</u> by Paul Giganti Hop Scotch math Math wizards sheets Fact chants	HL MM 85 Math Wizard sheets Fact chants sheets
4.2 Multiplication Arrays			Square Products (Display MM 89 on the Smart Board.)	Enrichment MM 416 HL MM 87
4.3 Equal Shares & Equal Groups		Division Arrays**	<u>The Doorbell Rang</u> by Pat Hutchins	MM 418 (Division Arrays-Order 3 sets.) HL MM 90
4.4 Division Ties to Multiplication		Division Arrays	Equal Sharing Mystery Number	Enrichment MM 94 HL MM 92
4.5 Multiplication Fact Power and shortcuts		Beat the Calculator		HL MM 96
4.6 Multiplication & Division Fact Families			Examining a Pattern on a Multiplication/Division Chart (Do on the Smart Board.)	HL MM 100
4.7 Baseball Multiplication Lesson 4.8-4.10 next page		Baseball Multiplication**	Making Arrays for 24	Enrichment MM 416 MM 443 (Baseball Multiplication) HL MM 104
EXPLORATIONS 4.8 Exploring Arrays and Facts	<i>Exploration A: Setting Up the Number of Dots</i> <i>Exploration B: Setting Up Chairs</i> <i>Exploration C: Practicing Multiplication and Division Facts with a Fact Platter</i>	Beat the Calculator	Exploring with Arrays (Do on the Smart Board.)	Exploration B MM 106 (5 copies) Exploration C MM 107 (5 copies) HL MM 108

4.9 Estimating Distances with Map Scale	MJ 96A, 96B	Division Arrays	Scale Drawings	Enrichment MM 112 HL MM 110-111
4.10 Coin Toss Experiment			Making Predictions about Rolling Dice	Enrichment MM 114
Star Test Review Unit Test				Star Test Review Unit Test

Unit 4 Games:

** Denotes initial introduction of the game.

Order 200 copies of each game board.

Problem Driven Math 5: 11, 12

Additional Activities:

Finish Math Quest Problem Solving Strategies (Practice A and B)

Begin Hopscotch Math

CML Problems

CML Explanation Sheet

Vocabulary Packet

Perplexors (Optional)

Unit 5- Place Value in Whole Numbers

EM Lesson Unit 5	Journal Pages	Games	Enrichments	Copies
5.1 Place Value Through Ten Thousands		Baseball Multiplication (Advanced Version)	Patterns on a 100-Number Grid	Enrichment MM 121 MM 444 (Baseball Multiplication Advanced Version) HL MM 120
5.2 Reading, Writing, and Ordering Decimals	MJ 103A, 103B	Number Top-It**	Comparing 5-Digit Numbers	Enrichment MM 124 HL MM 123
5.3 Place Value to Millions		Number Top-It		HL MM 128
5.4 Application: The US Census		Number Top-It	Working with Populations	Enrichment MM 133 HL MM 131
5.5 Very Large Numbers		Number Top-It		HL MM 135
EXPLORATIONS 5.6 Exploring Estimates and Polygons	<i>Exploration A: Finding the Value of Base-10 Blocks</i> <i>Exploration B: Identifying Squares, Rhombuses, and Triangles</i> <i>Exploration C: Finding Perimeters, Areas, and Shapes of Polygons</i>		Considering Half a Cube as the ONE (Use as a discussion.)	
5.7 Model Decimals with Base 10 Blocks			Writing Names on Hundred Grids	Enrichment MM 140 (60 copies) "All in a Name" Label HL MM 139
5.8 Tenths and Hundredths		Beat the Calculator (Multiplication)	Modeling Decimals to the Thousandths (Do on the Smart Board.) Rounding decimals	HL MM 144
5.9 Tenths and Hundredths of a meter			Writing About Tenths and Hundredths (Do on the Smart Board.)	MM 147 HL MM 148

5.10 Application: Rainfall		Number Top-It Decimal Solitaire**		MM 150 HL MM 151
5.11 Place Value on Decimals		Baseball Multiplication	Decimals Between Whole Numbers	Enrichment MM 158 HL MM 157
5.12 Sunrise-Sunset Line Graphs		Beat the Calculator (Multiplication)	World Population Growth	Enrichment MM 162 HL MM 161
Star Test Review Unit Test				Star Test Review Unit Test

Unit 5 Games:

** Denotes initial introduction of the game.

Order 200 copies of each game board.

Problem Driven Math 5:

9, 14, 16, 18, 19

Additional Activities:

Hopscotch Math

CML Problems

CML Explanation Sheet

Vocabulary Packet

Perplexors (Optional)

Unit 6- Geometry

EM Lesson Unit 6	Journal Pages	Games	Enrichments	Copies
6.1 Investigating Line Segments, Rays, and Lines		Number Top-It (Decimals)	Diagonals of Polygons	Enrichment MM 169 HL MM 167
6.2 Parallel & Intersecting Line Segments, Rays, and Lines	<ul style="list-style-type: none"> · Perpendicular lines · Parallell lines 		Parallel Possibilities (Add the term <i>perpendicular</i> to the discussion.)	Enrichment MM 172 HL MM 171
6.3 Angles and Turns		Number Top-It (Decimals) Robot Game**		HL: 173
6.4 Triangles			<u>The Greedy Triangle</u> by Marilyn Burns Counting Triangles	Enrichment MM 175 HL MM 174
6.5 Quadrangles		Name That Number	Shading Shapes (Display MM 458 on the Smart Board.)	Enrichment MM 457 (B2B) HL MM 177
6.6 Polygons			Sorting Geometry Vocabulary	HL MM 178
6.7 Drawing Angles		Beat the Calculator (Multiplication)		HL MM 181
6.8 Measuring Angles			Clock Angles	Enrichment MM 183-184 (B2B) HL MM 182 MM 428
6.9 Symmetry		Angle Race**	Pattern-Block Symmetry Riddles Symmetry Video on You Tube	Enrichment MM 187 MM 185
EXPLORATIONS 6.10 Exploring Congruence, Line Segments, and Decimals	<i>Exploration A: Exploring Congruent Shapes</i> <i>Exploration B: Creating an 8-Point Design</i> <i>Exploration C: Designing Base-10 Block Decimals</i>	Angle Race	Counting Line Segments (Do with <i>Exploration B.</i>)	MM 190 HL MM 192

6.11 Polyhedrons: Part 1			Faces on a Cube	Enrichment MM 198 HL MM 196 MM 194-195
6. 12 Polyhedrons: Part 2			Solving Geometric Riddles (Do on the Smart Board.)	HL MM 199 (single-sided)
Star Test Review Unit Test				Star Test Review Unit Test

***Mid-Year Test**

Unit 6 Games:

** Denotes initial introduction of the game.

Order 200 copies of each game board.

Problem Driven Math 5:

none

Additional Activities:

Hopscotch Math

CML Problems

CML Explanation Sheet

Vocabulary Packet

Perplexors (Optional)

Unit 7- Multiplication and Division

EM Lesson Unit 7	Journal Pages	Games	Enrichments	Copies
7.1 Patterns in products		Name That Number	Discuss arrays.	HL MM 206
7.2 Multiplication Facts Survey				HL MM 209
7.3 Fact Power		Multiplication Bingo	Frames-and-Arrows Puzzles	Enrichment MM 214 HL MM 211-212
7.4 Number Models with parentheses			Dot Patterns with Number Models	Enrichment MM 216 HL MM 215
7.5 Scoring in Basketball: An Application			Names for Digits	Enrichment MM 219 HL MM 217
7.6 Extended Facts: Multiplication & Division		Beat the Calculator (Multiplication)		HL MM 220
7.7 Estimating Cost			Estimating Paper Consumption	Enrichment MM 224 HL MM 222
7.8 Extended Facts: Products of tens		Baseball Multiplication with Tens**	Multi-digit Multiplication	Enrichment MM 227 HL MM 225 MM 445 (Baseball Multiplication with Tens)
EXPLORATIONS 7.9 Exploring Ratios & Geometric Figures	<i>Exploration A: Exploring Similar Polygons</i> <i>Exploration B: Exploring Ratio Problems</i> <i>Exploration C: Solving a Geometry Problem</i>	Roll to 100		MM 456 (Roll to 100) MM 228, 229, 230 (stapled/8 copies) HL MM 231

Star Test Review Unit Test				Star Test Review Unit Test
----------------------------------	--	--	--	----------------------------------

Teach Skills:

Elapsed time

Inequality equations: $3 \times 6 = 2 \times ?$

Unit 7 Games:

** Denotes initial introduction of the game.

Order 200 copies of each game board.

Problem Driven Math 5:

1, 2, 4, 17, 23

Additional Activities:

Finish Hopscotch Math

Supplemental Multiplication Game

CML Problems

CML Explanation Sheet

Vocabulary Packet

Perplexors (Optional)

Unit 8- Fractions

EM Lesson Unit 8	Journal Pages	Games	Enrichments	Copies
8.1 Naming Parts with Fractions				HL MM 237
8.2 Blocks in a Bag Experiment		The Block Drawing Game**		HL MM 240
EXPLORATIONS 8.3 Explorations: Exploring Fractions Re-forming Squares Combinations	<i>Exploration A: Finding Relationships Among Shapes</i> <i>Exploration B: Taking Apart and Putting Together Squares</i> <i>Exploration C: Dressing for the Party</i>	Multiplication Bingo		HL MM 245 MM 449 (Multiplication Bingo) MM 244 socks, pants, shoes
8.4 Number-Line Posters for Fractions			Shopping Fraction-Strip Problems	Enrichment MM 251 MM 250 MM 247 HL MM 248
8.5 Equivalent Fractions		Equivalent Fractions Game** The Block Drawing Game	Rules for Equivalent Fractions	Enrichment MM 255 HL MM 252-253
8.6 Comparing Fractions		Fraction Top-It**	Comparing and Ordering Fractions (Teach Butterfly Method.)	HL MM 256
8.7 Fractions Greater than ONE		Equivalent Fractions Game Fraction Top-It	Placing Fractions on a Number Line (Do on the Smart Board.)	MM 436 HL MM 258-259
8.8 Fractions in Number Stories		The Block Drawing Game	<u>Math Curse</u> by Jon Scieszka	HL MM 262
Star Test Review Unit Test				Star Test Review Unit Test

Unit 8 Games:

** Denotes initial introduction of the game.

Order 200 copies of each game board.

Problem Driven Math 5:

5, 6, 7, 13, 20

Additional Activities:

CML Problems

CML Explanation Sheet

Vocabulary Packet

Perplexors (Optional)

Unit 9-Multiplication and Division

EM Lesson Unit 9	Journal Page	Games	Enrichments	Copies
9.1 Multiply & Divide with Multiples of 10, 100, 1,00		Name that Number		HL MM 267
9.2 Using Mental Math to Multiply			Allowance Plan	Enrichment MM 271 HL MM 269
EXPLORATIONS 9.3 Exploring Arrays, Areas, Fractions	<i>Exploration C: Finding Fractions of Fractions of Regions</i>			HL MM 278
9.4 A Multiplication Algorithm			Number Patterns	Enrichment MM 282 HL MM 280
9.5 Buying at the Stock Up Sale		Fraction Top-It	10% Sales Tax at the Stock-Up Sale	Enrichment MM 285 (old edition) HL MM 283
9.6 Factors of a Whole Number		Factor Bingo**	Finding Factors	Enrichment MM 287 MM 448 (Factor Bingo) HL MM 286
9.7 Sharing Money			Equal Shares of Money	Enrichment MM 289 HL MM 288
9.8 Broken Calculator Division		Factor Bingo Roll to 100	Pizza with Remainders	Enrichment MM 292 HL MM 290 MM 456 (Roll to 100)
9.9 Lattice Multiplication		Factor Bingo	Multiplication in Music	Enrichment MM 294 HL MM 293
EXPLORATIONS 9.10 Exploring Arrays, Equilateral Triangles, & Strength of Paper	<i>Exploration E: Finding Number Patterns by Building Equilateral Triangles</i>		Triangular Numbers	Enrichment MM 302 HL MM 301 MM 297, 298, 299 (stapled B2B)

9.11 Products of 2 Digit Numbers, Part 1	.	Angle Race	An Error in Lattice Multiplication	Enrichment MM 305 (1/2 sheets) HL MM 304
9.12 Products of 2 Digits Numbers, Part 2	.	Beat the Calculator (Multiplication)		HL MM 307 MM 310-311 (B2B)
9.13 Positive and Negative Numbers			Exploring Order in Subtraction	Enrichment MM 314 HL MM 312
Star Test Review Unit Test				Star Test Review Unit Test

MCA Practice packet

Review: comparing and ordering fractions from least to greatest

Unit 9 Games:

** Denotes initial introduction of the game.

Order 200 copies of each game board.

Problem Driven Math 5:

30

Additional Activities:

CML Problems

CML Explanation Sheet

Vocabulary Packet

Perplexors (Optional)

Begin Into the Unknown (Optional)

Unit 10- Measurement and Data

EM Lesson Unit 10	Journal Pages	Games	Enrichments	Copies
10.1 Review Length				HL MM 320 MM 319
10.2 Volume		Fraction Top-It	Exploring the Volume of Cubes	Enrichment MM 327 MM 323
10.3 Weight	Need scales	Factor Bingo		HL MM 329
EXPLORATIONS 10.4 Weight and Volume	<i>Exploration B (old edition): Building Prisms with the Same Volume Need: Coffee can and Scales</i>	Beat the Calculator (Multiplication)	Doubling with Volume	Enrichment MM 334 (old edition) MM 333 (old edition)
10.5 Capacity	Need: Volume set			HL MM 337
10.6 The Mean and Median	MJ 255A, 255B		Making a Data Set	Enrichment MM 342, 341 (stapled) HL MM 340
10.7 Calculating the Mean		Multiplication Top-It		HL MM 343 MM 345
10.8 Calculator Memory			Calculator Riddles	Enrichment MM 348 HL MM 346
10.9 Frequency Distributions			Comparing Waist-to-Floor (Boys and Girls) Measurements	Enrichment MM 350, 352 HL MM 351
10.10 Coordinate Grids			Geoboard Polygons	Enrichment MM 438 HL MM 353
Star Test Review Unit Test				Star Test Review Unit Test

*Coordinate grid packet, worksheets

*Do end of year test as review

Unit 10 Games:

** Denotes initial introduction of the game.

Order 200 copies of each game board.

Problem Driven Math 5:

27

Additional Activities:

CML Problems

CML Explanation Sheet

Vocabulary Packet

Landmark Chants (Optional)

Supplemental Measurement Packet to include metric weight, volume, capacity, etc.

Additional Coordinate Grid Worksheets

Perplexors (Optional)

Into the Unknown (Optional)

Unit 11- Probability; Year-Long Projects, Revisited

EM Lesson Unit 11	Journal Pages	Games	Enrichments	Copies
11.1 Length of Day Project Revisited		Beat the Calculator (Multiplication)	Planning a Field Trip	Enrichment MM 362
11.2 National High/Low Temperature Summaries				
11.3 Spinner Experiment			Spinners and Tallies	Enrichment MM 371 MM 366
11.4 Designing Spinners		The Block Drawing Game Spinning to Win**	Creating a Spinner	Enrichment MM 374 (1/2 sheets)
11.5 Using Data to Predict Outcomes				MM 377
Star Test Review Unit Test				Star Test Review Unit Test

Unit 11 Games:

** Denotes initial introduction of the game.

Order 200 copies of each game board.

Problem Driven Math 5:

none

Additional Activities:

Vocabulary Packet

Pastures (Optional)

Perplexors (Optional)

Into the Unknown (Optional)

