

Knowre Math: **Grade 3** Curriculum

Chapter 1 Place Value

Lesson	Topic	MGSE
1-1 Models of Numbers Less Than 1,000	A) Base Ten Blocks to Write Numbers Between 100 and 1,000	MGSE2.NBT.3
	B) Base Ten Blocks to Model Numbers Less Than 1,000	
1-2 Models of Numbers Less Than 10,000	A) Using Grouping to Write Numbers in Standard Form	
	B) Base Ten Blocks to Write Numbers Less Than 10,000	
	C) Base Ten Blocks to Model Numbers Less Than 10,000	
1-3 Place Values Less Than 1,000,000	A) Place Values Less Than Millions	MGSE4.NBT.2
	B) Expanded and Standard Form of Numbers	
1-4 Reading and Writing Numbers Less Than 10,000	A) Reading and Writing Three-Digit Numbers	MGSE2.NBT.3, MGSE4.NBT.2
	B) Reading and Writing Four-Digit Numbers	
1-5 Comparing Numbers Less Than 1,000	A) Using Place Values to Compare Numbers Less Than 1,000	MGSE2.NBT.4
	B) Comparing Numbers Less Than 1,000	
1-6 Comparing Numbers Less Than 10,000	A) Using Place Values to Compare Numbers Less Than 10,000	MGSE4.NBT.2
	B) Comparing Numbers Less Than 10,000	
1-7 Ordering Numbers Less Than 10,000	A) Identifying the Smallest or Greatest Number from a List	
	B) Ordering Whole Numbers Less Than 10,000	
1-8 Rounding Using Number Lines	A) Rounding to the Nearest Ten on a Number Line	
	B) Rounding to the Nearest Hundred on a Number Line	
	C) Rounding to the Nearest Thousand on a Number Line	
1-9 Rounding	A) Rounding to the Nearest Ten	MGSE3.NBT.1
	B) Rounding to the Nearest Hundred	
	C) Rounding to the Nearest Thousand	

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Chapter 2 Adding and Subtracting

Lesson	Topic	MGSE
2-1 Adding without Regrouping	A) Using Base Ten Blocks to Add - No Regrouping	MGSE3.NBT.2
	B) Using Place Value to Add - No Regrouping	
	C) Adding Numbers Vertically - No Regrouping	
2-2 Adding with Sums Less Than 1,000 - Regrouping	A) Using Base Ten Blocks to Add - Regrouping	MGSE3.NBT.2
	B) Using Place Value to Add - Regrouping	
	C) Adding Numbers Vertically - Regrouping	
2-3 Adding with Sums Less Than 10,000 - Regrouping	A) Using Place Value to Add with Sums Less Than 10,000	MGSE3.NBT.2
	B) Adding Numbers Vertically - Regrouping with Hundreds	
	C) Adding Numbers Vertically - Regrouping Any Place Value	
2-4 Subtracting without Regrouping	A) Using Base Ten Blocks to Subtract - No Regrouping	MGSE3.NBT.2
	B) Using Place Value to Subtract - No Regrouping	
	C) Subtracting Numbers Vertically - No Regrouping	
2-5 Subtracting with Regrouping	A) Using Base Ten Blocks to Subtract - Regrouping	MGSE3.NBT.2
	B) Using Place Value to Subtract - Regrouping	
	C) Subtracting Numbers Vertically - Regrouping	
2-6 Subtracting with Regrouping Over Zero	A) Using Base Ten Blocks to Subtract - Regroup Over Zero	MGSE3.NBT.2
	B) Using Place Value to Subtract - Regroup Over One Zero	
	C) Using Place Value to Subtract - Regroup Over Two Zeros	
	D) Subtracting Numbers Vertically - Regroup Over One Zero	
	E) Subtracting Numbers Vertically - Regroup Over Two Zeros	
2-7 Horizontal Addition	A) Adding Numbers Horizontally - No Regrouping	MGSE3.NBT.2
	B) Adding Numbers Horizontally - Regrouping	
2-8 Horizontal Subtraction	A) Subtracting Numbers Horizontally - No Regrouping	MGSE3.NBT.2
	B) Subtracting Numbers Horizontally - Regrouping	
	C) Subtracting Numbers Horizontally - Regrouping Over Zero	

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Chapter 2 Adding and Subtracting (cont.)

Lesson	Topic	MGSE
2-9 Adding and Subtracting Three or More Numbers Horizontally	A) Adding Three or More Numbers Horizontally	MGSE3.NBT.2
	B) Subtracting Three or More Numbers Horizontally	
	C) Add and Subtract Three or More Numbers Horizontally	
2-10 Addition and Subtraction Relationships	A) Relationship Between Addition and Subtraction Sentences	MGSE3.NBT.2
	B) Missing Numbers in Addition and Subtraction Sentences	
	C) Adding Numbers Vertically - Regrouping	
2-11 Estimating Sums	A) Estimating Sums	MGSE3.OA.8
2-12 Estimating Differences	A) Estimating Differences	MGSE3.OA.8

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Chapter 3 Modeling Multiplication

Lesson	Topic	MGSE
3-1 Equal Groups	A) Describing Equal Groups	MGSE3.OA.1
3-2 Addition Expressions and Equal Groups	A) Writing Repeated Addition Expressions from Equal Groups	MGSE3.OA.1
	B) Finding the Total Number of Objects in Equal Groups	
3-3 The Meaning of Multiplication	A) Multiplication as Equal Groups	MGSE3.OA.1,
	B) Equal Groups and Multiplication Expressions	MGSE3.OA.3,
	C) Repeated Addition and Multiplication Expressions	MGSE3.OA.7
3-4 Multiplication with Equal Groups and Addends	A) Parts of Multiplication Sentences	MGSE3.OA.1, MGSE3.OA.3,
	B) Repeated Addition to Multiply	MGSE3.OA.4, MGSE3.OA.7
3-5 Using Equal Groups to Find Unknowns in Multiplication Sentences	A) Equal Groups to Multiply	MGSE3.OA.1, MGSE3.OA.3, MGSE3.OA.4, MGSE3.OA.7
3-6 Multiplication with Arrays	A) Arrays and Multiplication Sentences	MGSE3.OA.1, MGSE3.OA.3,
	B) Arrays to Multiply	MGSE3.OA.4, MGSE3.OA.7
3-7 Multiplication with Number Lines and Hundreds Charts	A) Number Lines and Multiplication Sentences	MGSE3.OA.1,
	B) Number Lines to Multiply	MGSE3.OA.3, MGSE3.OA.4,
	C) Hundreds Charts to Multiply	MGSE3.OA.7
3-8 The Order of Factors in Multiplication	A) Commutative Property of Multiplication	MGSE3.OA.1, MGSE3.OA.5, MGSE3.OA.7

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Chapter 4 Multiplication Fluency

Lesson	Topic	MGSE
4-1 Multiplying by Zero and One	A) Strategies to Multiply by One	MGSE3.OA.1, MGSE3.OA.3,
	B) Strategies to Multiply by Zero	MGSE3.OA.7, MGSE3.OA.8
4-2 Multiplying by Two and Four	A) Strategies to Multiply by Two	MGSE3.OA.1, MGSE3.OA.3,
	B) Strategies to Multiply by Four	MGSE3.OA.7, MGSE3.OA.8
4-3 Multiplying by Five and Ten	A) Strategies to Multiply by Five	MGSE3.OA.1, MGSE3.OA.3,
	B) Strategies to Multiply by Ten	MGSE3.OA.7, MGSE3.OA.8
4-4 Multiplying by Three and Six	A) Strategies to Multiply by Three	MGSE3.OA.1, MGSE3.OA.3,
	B) Strategies to Multiply by Six	MGSE3.OA.7, MGSE3.OA.8
4-5 Multiplying by Seven, Eight, and Nine	A) Strategies to Multiply by Seven	MGSE3.OA.1, MGSE3.OA.3,
	B) Strategies to Multiply by Eight	MGSE3.OA.7, MGSE3.OA.8
	C) Strategies to Multiply by Nine	MGSE3.OA.8
4-6 Basic Multiplication Facts	A) Single Digit Multiplication	MGSE3.OA.1, MGSE3.OA.3,
	B) Multiplying Ten and a One-Digit Number	MGSE3.OA.7, MGSE3.OA.8

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Chapter 5 Modeling Division

Lesson	Topic	MGSE
5-1 Equal Groups and Division	A) Sharing Objects into Equal Groups	MGSE3.OA.2, MGSE3.OA.3, MGSE3.OA.7
5-2 Division Expressions	A) Division as Equal Groups	MGSE3.OA.2, MGSE3.OA.3, MGSE3.OA.7
	B) Equal Groups and Division Expressions	MGSE3.OA.7
5-3 The Meaning of Division	A) Parts of Division Sentences	MGSE3.OA.2, MGSE3.OA.3, MGSE3.OA.4, MGSE3.OA.7
	B) Equal Groups to Divide	MGSE3.OA.7
5-4 Division with Arrays	A) Arrays and Division Sentences	MGSE3.OA.2, MGSE3.OA.3, MGSE3.OA.4, MGSE3.OA.7
	B) Arrays to Divide	MGSE3.OA.7
5-5 Division with Number Lines	A) Number Lines and Division Sentences	MGSE3.OA.2, MGSE3.OA.3, MGSE3.OA.4, MGSE3.OA.7
	B) Using Number Lines to Divide	MGSE3.OA.7
5-6 Division as Repeated Subtraction	A) Division as Repeated Subtraction	MGSE3.OA.2, MGSE3.OA.3, MGSE3.OA.4, MGSE3.OA.7
	B) Repeated Subtraction and Division Sentences	MGSE3.OA.4, MGSE3.OA.7
	C) Repeated Subtraction to Divide	MGSE3.OA.7

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Chapter 6 Division Fluency

Lesson	Topic	MGSE
6-1 Dividing by One and Two	A) Strategies to Divide by One	MGSE3.OA.2, MGSE3.OA.3,
	B) Strategies to Divide by Two	MGSE3.OA.7, MGSE3.OA.8
6-2 Dividing by Five and Ten	A) Strategies to Divide by Five	MGSE3.OA.2, MGSE3.OA.3,
	B) Strategies to Divide by Ten	MGSE3.OA.7, MGSE3.OA.8
6-3 Dividing by Three and Four	A) Strategies to Divide by Three	MGSE3.OA.2, MGSE3.OA.3,
	B) Strategies to Divide by Four	MGSE3.OA.7, MGSE3.OA.8
6-4 Dividing by Six and Seven	A) Strategies to Divide by Six	MGSE3.OA.2, MGSE3.OA.3,
	B) Strategies to Divide by Seven	MGSE3.OA.7, MGSE3.OA.8
6-5 Dividing by Eight and Nine	A) Strategies to Divide by Eight	MGSE3.OA.2, MGSE3.OA.3,
	B) Strategies to Divide by Nine	MGSE3.OA.7, MGSE3.OA.8
6-6 Basic Division Facts	A) One-Digit Quotients When Dividing by One-Digit Numbers	MGSE3.OA.2, MGSE3.OA.3,
	B) One-Digit Quotients When Dividing by Ten	MGSE3.OA.7, MGSE3.OA.8

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Chapter 7 Mixed Operations and Patterns

Lesson	Topic	MGSE
7-1 Multiplication and Division Relationships	A) Relationships Between Multiplication and Division Sentences	MGSE3.OA.4, MGSE3.OA.5,
	B) Missing Numbers in Multiplication and Division Sentences	MGSE3.OA.6, MGSE3.OA.8
7-2 Addition and Subtraction Expressions and Equations	A) Addition and Subtraction Expressions	MGSE3.OA.8
7-3 Multiplication and Division Expressions and Equations	A) Multiplication and Division Expressions	MGSE3.OA.8
	B) Expressions with More Than One Operation	
7-4 Multiplying or Dividing Three or More Numbers	A) Multiplying Three or More Numbers	MGSE3.OA.5, MGSE3.OA.7,
	B) Dividing Three or More Numbers	MGSE3.OA.8
7-5 Mixed Operations	A) Evaluating Expressions with More Than One Operation	MGSE3.OA.5, MGSE3.OA.7, MGSE3.OA.8
7-6 Patterns	A) Repeating Patterns	MGSE3.OA.9
7-7 Rules and Patterns	A) Patterns and Rules	MGSE3.OA.9
	B) Even and Odd Numbers	
7-8 Multiplying by Multiples of Ten	A) Base Ten Blocks to a Multiply One-Digit Number and a Multiple of Ten	MGSE3.OA.5, MGSE3.OA.9, MGSE3.NBT.3
	B) Place Value to Multiply a One-Digit Number and a Multiple of Ten	
	C) Multiplying a One-Digit Number and a Multiple of Ten	
7-9 Modeling the Distributive Property	A) Using Arrays to Model the Distributive Property	MGSE3.OA.5, MGSE3.MD.7.c
7-10 Distributive Property to Multiply	A) Equal Expressions with Split Factors	MGSE3.OA.5
	B) Using the Distributive Property to Multiply	

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Chapter 8 Fractions

Lesson	Topic	MGSE
8-1 Equal Parts	A) Equal Parts	MGSE3.G.2
8-2 Fraction Basics	A) Parts of Fractions	MGSE3.NF.1, MGSE3.G.2
8-3 Word Form of Fractions	A) Reading and Writing Fractions	MGSE3.G.2
8-4 Fractions as Shaded Parts	A) Modeling Fractions with Fraction Bars	MGSE3.G.2
	B) Unit Fractions	
8-5 Equal Parts on Number Lines	A) Equal Parts on a Number Line	MGSE3.NF.1, MGSE3.NF.2.a
8-6 Fractions on Number Lines	A) Writing Fractions on a Number Line	MGSE3.NF.1, MGSE3.NF.2.a, MGSE3.NF.2.b
	B) Showing Fractions on a Number Line	
8-7 Equivalent Fractions with More Parts	A) Using Models to Write Equivalent Fractions	MGSE3.NF.3.a, MGSE3.NF.3.b, MGSE3.NF.3.c
8-8 Equivalent Fractions with Fewer Parts	A) Using Models to Simplify Fractions	MGSE3.NF.3.a, MGSE3.NF.3.b, MGSE3.NF.3.c
8-9 Comparing Fractions with the Same Denominator	A) Comparing Fractions with the Same Denominator	MGSE3.NF.3.d
	B) Ordering Fractions with the Same Denominator	
8-10 Comparing Fractions with the Same Numerator	A) Comparing Unit Fractions	MGSE3.NF.3.d
	B) Comparing Fractions with the Same Numerator	
	C) Ordering Fractions with the Same Numerator	

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Chapter 9 Measurement

Lesson	Topic	MGSE
9-1 Measuring Length - Inches	A) Using Inches to Measure Objects	MGSE3.MD.4
9-2 Measuring Length - Feet	A) Using Feet to Measure Objects	MGSE3.MD.4
9-3 Measuring Volume - Metric	A) Estimating Metric Units of Volume	MGSE3.MD.2
9-4 Measuring Mass - Metric	A) Estimating Metric Units of Mass	MGSE3.MD.2
9-5 Measuring Temperature	A) Reading the Temperature on a Thermometer	
	B) Showing the Temperature on a Thermometer	
	C) Hottest or Coldest Temperature on a Thermometer	
	D) Comparing Temperatures	
9-6 Reading Time on an Analog Clock	A) Telling Time on an Analog Clock	MGSE3.MD.1
9-7 Showing Time on an Analog Clock	A) Clockwise and Counterclockwise	MGSE3.MD.1
	B) Showing Time on an Analog Clock	
9-8 Elapsed Time - Future	A) Time in a Given Number of Hours and Minutes	MGSE3.MD.1
9-9 Elapsed Time - Past	A) Time a Given Number of Hours and Minutes Ago	MGSE3.MD.1
9-10 Elapsed Time - Hours and Minutes	A) Elapsed Time	MGSE3.MD.1
9-11 Money	A) Values of Sets of Mixed Coins	MGSE2.MD.8
	B) Values of Sets of Bills and Coins	

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Chapter 10 Data

Lesson	Topic	MGSE
10-1 Making Pictographs	A) Making Scaled Pictographs	MGSE3.MD.3
10-2 Reading Pictographs	A) Using Scaled Pictographs to Make a Frequency Table	MGSE3.MD.3
	B) Using Scaled Pictographs to Make a Tally Table	
	C) Reading Scaled Pictographs	
10-3 Making Bar Graphs	A) Finding the Scale of a Bar Graph	MGSE3.MD.3
	B) Making Scaled Bar Graphs	
10-4 Reading Bar Graphs	A) Finding the Frequency in a Scaled Bar Graph	MGSE3.MD.3
	B) Scaled Bar Graphs to Make Tally and Frequency Tables	
	C) Reading Scaled Bar Graphs	
10-5 Making Line Plots	A) Making Line Plots	MGSE3.MD.4
10-6 Reading Line Plots	A) Understanding Line Plots	
	B) Line Plots to Make Tally and Frequency Tables	
	C) Reading Line Plots	

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Chapter 11 Two-Dimensional Figures

Lesson	Topic	MGSE
11-1 Attributes of Two-Dimensional Figures	A) Sides, Angles, and Vertices of Two-Dimensional Figures	MGSE3.G.1
	B) Identifying Figures with Given Attributes	
11-2 Names of Two-Dimensional Figures	A) Attributes of Figures Given Their Names	MGSE3.G.1
11-3 Quadrilaterals	A) Defining Quadrilaterals	MGSE3.G.1
	B) Attributes of Rectangles, Rhombuses, and Squares	
11-4 Perimeter	A) Perimeter on a Grid	MGSE3.MD.8
	B) Perimeters of Figures with All Side Lengths Given	
	C) Perimeters of Rectangles and Squares	
11-5 Area of Shapes on a Grid	A) Area on a Grid	MGSE3.MD.5.a, MGSE3.MD.5.b, MGSE3.MD.6, MGSE3.MD.7.a, MGSE3.MD.7.b
11-6 Area of Squares and Rectangles	A) Areas of Rectangles and Squares	MGSE3.MD.5.a, MGSE3.MD.5.b, MGSE3.MD.7.a, MGSE3.MD.7.b
11-7 Area Extensions	A) Shapes with Equal Perimeters or Areas	MGSE3.MD.8
	B) Areas of Figures Composed of Rectangles and Squares	