

# Knowre Math: Grade 5 Curriculum

## Chapter 1 Whole Numbers and Number Sense

Lesson	Topic	NGSSS
1-1 Place Value: Whole Numbers	A) Place Value Relationships	MAFS.5.NBT.1.1
	B) Expanded Form	
1-2 Products with Multiples of 10	A) Patterns in Zeros - Multiplication	MAFS.5.NBT.1.1, MAFS.5.NBT.1.2
	B) Estimating Products	
1-3 Powers of 10	A) Exponents	MAFS.5.NBT.1.2, MAFS.6.EE.1.1
	B) Powers of Ten	
1-4 Number Properties	A) Commutative Property	MAFS.5.OA.1.1, MAFS.5.OA.1.2
	B) Associative Property	
	C) Identity Property	
	D) Multiplication and Division by Zero	
	E) Distributive Property	

## Chapter 2 Whole Number Multiplication

Lesson	Topic	NGSSS
2-1 Multiplying by One-Digit Numbers - Tables and Partial Products	A) Multiply a One-Digit Number and a Multi-Digit Number - Table	MAFS.4.NBT.2.5
	B) Multiply a One-Digit Number and a Multi-Digit Number - Partial Products	
2-2 Multiplying by One-Digit Numbers - Standard Algorithm	A) Multiply a One-Digit Number and a Multi-Digit Number - Standard Algorithm	MAFS.5.NBT.2.5
	B) Horizontal Multiplication of a One-Digit Number and a Multi-Digit Number	
2-3 Multiplying Two Multi-Digit Numbers - Tables and Partial Products	A) Multiply Two Multi-Digit Numbers - Table	MAFS.5.NBT.2.5
	B) Multiply Two Multi-Digit Numbers - Partial Products	
2-4 Multiplying Two Multi-Digit Numbers - Standard Algorithm	A) Multiply Two Multi-Digit Numbers - Standard Algorithm	MAFS.5.NBT.2.5
	B) Horizontal Multiplication of Two Multi-Digit Numbers	

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## Chapter 3 Whole Number Division

Lesson	Topic	NGSSS
3-1 Quotients with Multiples of 10	A) Patterns in Zeros - Division	MAFS.5.NBT.1.1, MAFS.5.NBT.1.2
	B) Estimating Quotients	
3-2 Dividing by One-Digit Numbers	A) Divide a Multi-Digit Number by a One-Digit Number - Partial Quotients	MAFS.5.NBT.2.6
	B) Divide a Multi-Digit Number by a One-Digit Number - Standard Algorithm	
3-3 Dividing by Two-Digit Numbers	A) Divide Multi-Digit Numbers - Partial Quotients	MAFS.5.NBT.2.6
	B) Divide Multi-Digit Numbers - Standard Algorithm	
3-4 Horizontal Division	A) Equivalent Forms of Division	MAFS.5.NBT.2.6, MAFS.5.NF.2.3
	B) Horizontal Division	

## Chapter 4 Expressions and the Order of Operations

Lesson	Topic	NGSSS
4-1 Whole Number Order of Operations	A) Order of Operations	MAFS.5.OA.1.1
4-2 Writing Expressions	A) Addition and Subtraction Expressions	MAFS.5.OA.1.1, MAFS.5.OA.1.2
	B) Multiplication and Division Expressions	
	C) Power Expressions	
	D) Expressions with More Than One Operation	

## Chapter 5 Decimal Number Sense

Lesson	Topic	NGSSS
5-1 Place Value: Decimals	A) Place Value	MAFS.5.NBT.1.1, MAFS.5.NBT.1.3.a
	B) Reading and Writing Decimals	
	C) Place Value Relationships	
	D) Expanded Form	
5-2 Comparing and Ordering Decimals	A) Modeling Decimals	MAFS.5.NBT.1.3.b
	B) Using Models to Compare Decimals	
	C) Comparing Decimals	
5-3 Rounding Decimals and Estimating	A) Rounding Decimals	MAFS.5.NBT.1.4
	B) Estimating with Decimals by Rounding to the Nearest Whole	

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## Chapter 6 Adding and Subtracting Decimals

Lesson	Topic	NGSSS
6-1 Using Models to Add Decimals	A) Decimal Addition - Models	MAFS.5.NBT.2.7
6-2 Adding Decimals	A) Adding Decimals - Standard Algorithm	MAFS.5.NBT.2.7
	B) Horizontal Addition of Decimals	
6-3 Using Models to Subtract Decimals	A) Decimal Subtraction - Models	MAFS.5.NBT.2.7
6-4 Subtracting Decimals	A) Subtracting Decimals - Standard Algorithm	MAFS.5.NBT.2.7
	B) Horizontal Subtraction of Decimals	

## Chapter 7 Multiplying and Dividing Decimals

Lesson	Topic	NGSSS
7-1 Multiplying a Decimal and a Power of Ten	A) Patterns in Zeros - Decimal Multiplication	MAFS.5.NBT.2.7, MAFS.5.NBT.1.2
7-2 Multiplying Decimals	A) Patterns in Zeros - Decimal Multiplication	MAFS.5.NBT.2.7, MAFS.5.NBT.1.2
	B) Decimal Multiplication - Standard Algorithm	
	C) Horizontal Multiplication of Decimals	
7-3 Dividing a Decimal and a Power of Ten	A) Patterns in Zeros - Decimal Division	MAFS.5.NBT.2.7, MAFS.5.NBT.1.2
7-4 Dividing Decimals	A) Dividing by a Whole Number	MAFS.5.NBT.2.7
	B) Dividing by a Decimal	
	C) Horizontal Division of Decimals	

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## Chapter 8 Fraction Basics

<b>Lesson</b>	<b>Topic</b>	<b>NGSSS</b>
8-1 Simplifying Fractions	A) Factors of Numbers	MAFS.4.OA.2.4.a MAFS.4.NF.1.1
	B) Greatest Common Factor	
	C) Simplifying Fractions	
8-2 LCM and Equivalent Fractions	A) Multiples	MAFS.4.OA.2.4.b, MAFS.4.NF.1.1
	B) Least Common Multiple	
	C) Equivalent Fractions	
8-3 Comparing and Ordering Fractions	A) Comparing Fractions	MAFS.4.NF.1.2
	B) Ordering Fractions	
8-4 Fraction/Decimal Equivalents	A) Using Place Value to Write Decimals as Fractions	MAFS.4.NF.3.6
	B) Using Place Value to Write Fractions as Decimals	

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## Chapter 9 Fraction Operations

Lesson	Topic	NGSSS
9-1 Adding Fractions	A) Add Fractions - Common Denominators	MAFS.5.NF.1.1
	B) Add Whole Numbers and Fractions	
	C) Add Mixed Numbers - Common Denominators	
	D) Add Fractions - Different Denominators	
	E) Add Mixed Numbers - Different Denominators	
9-2 Subtracting Fractions	A) Subtract Fractions - Common Denominators	MAFS.5.NF.1.1
	B) Subtract Whole Numbers from Mixed Numbers	
	C) Subtract Mixed Numbers - Common Denominators	
	D) Subtract Fractions - Different Denominators	
	E) Subtract Fractions from Mixed Numbers - Different Denominators	
	F) Subtract a Fraction from a Whole Number	
9-3 Using Models and Reasoning to Multiply Fractions	A) Compare Size of Product to Size of Factor	MAFS.5.NF.2.4.a, MAFS.5.NF.2.4.b, MAFS.5.NF.2.5.a, MAFS.5.NF.2.5.b, MAFS.5.NF.2.6
	B) Fraction Multiplication - Models	
9-4 Multiplying Fractions	A) Multiplying Fractions	MAFS.5.NF.2.4.a, MAFS.5.NF.2.6
	B) Multiplying Fractions and Whole Numbers	
	C) Multiplying with Mixed Numbers	
9-5 Dividing Fractions	A) Compare Size of Quotient to Size of Dividend	MAFS.5.NF.2.7.a, MAFS.5.NF.2.7.b, MAFS.5.NF.2.7.c
	B) Fraction Division - Models	
	C) Relationship Between Multiplication and Division	
	D) Reciprocals	
	E) Division with Unit Fractions	

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## Chapter 10 Conversions

Lesson	Topic	NGSSS
10-1 Customary Length Conversions	A) Customary Length Conversions	MAFS.5.MD.1.1
10-2 Customary Volume and Weight Conversions	A) Customary Volume Conversions	MAFS.5.MD.1.1
	B) Customary Weight Conversions	
10-3 Metric Length Conversions	A) Metric Length Conversions	MAFS.5.MD.1.1
10-4 Metric Volume and Mass Conversions	A) Metric Volume Conversions	MAFS.5.MD.1.1
	B) Metric Mass Conversions	
10-5 Time Conversions	A) Time Conversions	MAFS.5.MD.1.1

## Chapter 11 Coordinate Planes and Line Plots

Lesson	Topic	NGSSS
11-1 Coordinate Planes	A) Parts of the Coordinate Plane	MAFS.5.G.1.1, MAFS.5.G.1.2
	B) Graphing Points on the Coordinate Plane	
	C) Writing Points as Ordered Pairs	
11-2 Patterns and Graphing	A) Tables and Ordered Pairs	MAFS.5.OA.2.3
	B) Writing Rules from Patterns	
	C) Using Rules to Complete Tables and Graphs	
	D) Using Patterns to Complete Tables and Graphs	
	E) Writing Rules from Tables and Graphs	
11-3 Line Plots	A) Line Plots and Data Sets	MAFS.5.MD.2.2
	B) Interpreting Data in Line Plots	

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## Chapter 12 Polygons and Prisms

<b>Lesson</b>	<b>Topic</b>	<b>NGSSS</b>
12-1 Classifying Polygons	A) Polygons	MAFS.5.G.2.3
	B) Congruent Segments and Angles	
	C) Regular Polygons	
12-2 Classifying Triangles	A) Using Angle Measures to Classify Triangles	MAFS.5.G.2.3
	B) Using Side Lengths to Classify Triangles	
12-3 Classifying Quadrilaterals	A) Attributes of Special Quadrilaterals	MAFS.5.G.2.3
	B) Classifying Parallelograms	
	C) Classifying Quadrilaterals	
12-4 Volumes of Rectangular Prisms	A) Using Unit Cubes to Find the Volume of a Solid	MAFS.5.MD.3.3.a MAFS.5.MD.3.3.b MAFS.5.MD.3.4, MAFS.5.MD.3.5.a MAFS.5.MD.3.5.b MAFS.5.MD.3.5.c
	B) Multiplying Length, Width, and Height to Find the Volume of a Rectangular Prism	
	C) Multiplying Area of Base and Height to Find the Volume of a Rectangular Prism	