

Knowre Math: **Grade 6** Curriculum

Chapter 1 Whole Numbers

Lesson	Topic	NGSSS
1-1 Dividing Using the Standard Algorithm	A) Long Division	MAFS.6.NS.2.2
	B) Equivalent Divisions	
	C) Horizontal Division	
1-2 Divisibility Tests	A) Divisibility Tests	MAFS.6.NS.2.2
1-3 Multiples and Factors	A) Multiples	MAFS.6.NS.2.4
	B) Least Common Multiples	
	C) Factors	
	D) Greatest Common Factors	
1-4 Exponents and the Order of Operations	A) Multiplication Symbols	MAFS.6.EE.1.1, MAFS.6.EE.1.4
	B) Defining Powers	
	C) Writing Expressions as Powers	
	D) Evaluating Powers	
	E) Missing Values in Power Equations	
	F) Order of Operations	
1-5 Prime Factorization	A) Prime and Composite Numbers	MAFS.6.NS.2.4, MAFS.6.EE.1.1
	B) Prime Factorization	
	C) Greatest Common Factors	
	D) Least Common Multiples	

Chapter 2 Fractions and Decimals

Lesson	Topic	NGSSS
2-1 Fractions	A) Fractions on Number Lines	MAFS.6.NS.3.6.c
	B) Whole Numbers as Fractions	
	C) Equivalent Fractions	
	D) Comparing Fractions	
	E) Simplifying Fractions	
	F) Mixed Numbers as Improper Fractions	
2-2 Adding and Subtracting Fractions	A) Adding and Subtracting Fractions with Common Denominators	MAFS.5.NF.1.1
	B) Adding and Subtracting Fractions with Different Denominators	

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Chapter 2 Fractions and Decimals (cont...)

Lesson	Topic	NGSSS
2-3 Multiplying and Dividing Fractions	A) Multiplying Fractions	MAFS.6.NS.1.1, MAFS.6.EE.1.1
	B) Powers of Nonnegative Fractions	
	C) Reciprocals	
	D) Dividing Fractions	
2-4 Adding and Subtracting Decimals	A) Decimals on Number Lines	MAFS.6.NS.2.3, MAFS.6.NS.3.6.c MAFS.6.NS.3.7.b
	B) Representing Repeating Decimals	
	C) Ordering Decimals	
	D) Adding Decimals	
	E) Subtracting Decimals	
2-5 Multiplying and Dividing Decimals	A) Multiplying Decimals	MAFS.6.NS.2.3, MAFS.6.NS.3.7.b MAFS.6.EE.1.1
	B) Powers of Nonnegative Decimals	
	C) Dividing Decimals	
2-6 Order of Operations with Rational Numbers	A) Terminating Decimals as Fractions	MAFS.6.NS.3.7.b
	B) Order of Operations with Nonnegative Rational Numbers	

Chapter 3 Basics of Algebra

Lesson	Topic	NGSSS
3-1 Variables and Expressions	A) Parts of Variable Expressions	MAFS.6.EE.1.2.a, MAFS.6.EE.1.2.b
	B) Writing Variable Expressions	
3-2 Operations and Variable Expressions	A) Omitting Multiplication Symbols with Variables	MAFS.6.EE.1.2.a, MAFS.6.EE.1.2.b, MAFS.6.EE.1.4, MAFS.6.EE.2.6
	B) Understanding Coefficients	
	C) Evaluating Variable Expressions	
3-3 Properties of Operations	A) Commutative Property	MAFS.6.EE.1.3, MAFS.6.EE.1.4
	B) Associative Property	
	C) Using the Properties to Multiply Terms	
	D) Identity Property	
3-4 Distributive Property	A) Distributive Property	MAFS.6.NS.2.4, MAFS.6.EE.1.3, MAFS.6.EE.1.4
	B) Rewrite Sums and Differences with the Distributive Property	

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Chapter 4 Equations and Inequalities

Lesson	Topic	NGSSS
4-1 Equations	A) Identifying Expressions and Equations	MAFS.6.EE.1.4, MAFS.6.EE.2.5, MAFS.6.EE.2.6, MAFS.6.EE.2.7
	B) Writing Equations	
	C) Solutions of Equations	
4-2 Solving One-Step Equations I	A) Subtraction Property of Equality	MAFS.6.EE.2.6, MAFS.6.EE.2.7
	B) Addition Property of Equality	
4-3 Solving One-Step Equations II	A) Division Property of Equality	MAFS.6.EE.2.6, MAFS.6.EE.2.7
	B) Multiplication Property of Equality	
4-4 Writing and Graphing Inequalities	A) Writing Inequalities from Verbal Expressions	MAFS.6.EE.2.5, MAFS.6.EE.2.8
	B) Solutions of Inequalities	
	C) Writing Inequalities from Number Lines	
	D) Graphing Inequalities	
4-5 Solving One-Step Inequalities	A) Subtraction Property of Inequality	MAFS.6.EE.2.5
	B) Addition Property of Inequality	
	C) Multiplication Property of Inequality	
	D) Division Property of Inequality	

Chapter 5 Ratios and Rates

Lesson	Topic	NGSSS
5-1 Ratios	A) Writing Ratios	MAFS.6.RP.1.1
	B) Simplifying Ratios	
	C) Equivalent Ratios	
5-2 Rates and Conversions	A) Unit Rates	MAFS.6.RP.1.2, MAFS.6.RP.1.3.b, MAFS.6.RP.1.3.d
	B) Conversion Factors	
	C) Unit Conversions within a System	
	D) Unit Rates and Dimensional Analysis	
5-3 Percents	A) Writing Percents as Fractions	MAFS.6.RP.1.3.c
	B) Writing Fractions as Percents	
	C) Writing Percents as Decimals	
	D) Writing Decimals as Percents	
	E) Percent Equations	

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Chapter 6 Integers

Lesson	Topic	NGSSS
6-1 Introduction to Integers	A) Classifying Numbers	MAFS.6.NS.3.5, MAFS.6.NS.3.7.a, MAFS.6.NS.3.7.b
	B) Representing Situations as Integers	
	C) Integers on Number Lines	
	D) Comparing Integers	
	E) Distance on a Number Line	
6-2 Opposites and Absolute Value	A) Opposites	MAFS.6.NS.3.6.a, MAFS.6.NS.3.7.a, MAFS.6.NS.3.7.c
	B) Absolute Values	
6-3 Adding and Subtracting Integers on a Number Line	A) Adding Integers on Number Lines	MAFS.7.NS.1.1.b
	B) Subtracting Integers on Number Lines	

Chapter 7 Coordinate Plane and Two Variable Equations

Lesson	Topic	NGSSS
7-1 Coordinate Plane	A) Identifying Quadrants and Axes of Coordinate Planes	MAFS.6.NS.3.6.b, MAFS.6.NS.3.6.c, MAFS.6.NS.3.8, MAFS.6.G.1.3
	B) Graphing Points	
	C) Writing the Coordinates of Points	
	D) Identifying Quadrants and Axes from Coordinates	
7-2 Distance and Reflections on a Coordinate Plane	A) Counting to Find the Distance Between Points	MAFS.6.NS.3.6.b, MAFS.6.NS.3.8, MAFS.6.G.1.3
	B) Using Absolute Value to Find the Distance Between Points	
	C) Reflections Over the x-axis	
	D) Reflections Over the y-axis	
7-3 Relations	A) Representing Relations in Different Forms	MAFS.6.RP.1.3.a, MAFS.6.RP.1.3.b, MAFS.6.EE.3.9
	B) Input and Output	
	C) Independent and Dependent Variables	
7-4 Two-Variable Equations	A) Evaluating Functions	MAFS.5.OA.2.3, MAFS.6.RP.1.3.a, MAFS.6.EE.3.9
	B) Graphing Linear Functions	
	C) Writing Linear Functions	

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Chapter 8 Two- and Three-Dimensional Geometry

Lesson	Topic	NGSSS
8-1 Area of Rectangles and Squares	A) Areas of Rectangles	MAFS.6.G.1.1, MAFS.6.G.1.3
	B) Areas of Squares	
8-2 Area of Triangles	A) Bases and Heights of Triangles	MAFS.6.G.1.1
	B) Areas of Triangles	
8-3 Area of Parallelograms and Trapezoids	A) Areas of Parallelograms	MAFS.6.G.1.1, MAFS.6.G.1.3
	B) Areas of Trapezoids	
8-4 Surface Area of Prisms and Pyramids Using Nets	A) Nets of Solids	MAFS.6.G.1.4
	B) Surface Areas of Prisms and Pyramids from Nets	
	C) Surface Areas of Prisms	
8-5 Volume of Rectangular Prisms	A) Volume from Cubic Units	MAFS.6.G.1.2
	B) Volumes of Right Prisms	

Chapter 9 Displays of Data

Lesson	Topic	NGSSS
9-1 Introduction to Statistics	A) Statistical Questions	MAFS.6.G.1.1, MAFS.6.SP.2.5.a, MAFS.6.SP.2.5.b
	B) Characteristics of Data Sets	
	C) Frequency Tables	
	D) Characteristics of Tables	
9-2 Dot Plots	A) Characteristics of Dot Plots	MAFS.6.G.1.1, MAFS.6.SP.2.5.a, MAFS.6.SP.2.5.b
	B) Dot Plots, Data Sets, and Frequency Tables	
	C) Finding the Number of Observations within a Range of Numbers	
	D) Finding the Minimum and Maximum Values	
	E) Finding the Mode	
9-3 Histograms	A) Characteristics of Histograms	MAFS.6.G.1.1, MAFS.6.SP.2.5.a, MAFS.6.SP.2.5.b
	B) Bins	
	C) Histograms, Data Sets, and Frequency Tables	
	D) Finding the Number of Observations within a Range of Numbers	
	E) Values in a Histogram	

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Chapter 10 Distributions of Data

Lesson	Topic	NGSSS
10-1 Measures of Center	A) Mean	MAFS.6.G.1.2, MAFS.6.G.1.3, MAFS.6.SP.2.5.c
	B) Median	
	C) Mean and Median of Same Data Set	
10-2 Measures of Variation	A) Range	MAFS.6.G.1.2, MAFS.6.G.1.3, MAFS.6.SP.2.5.c
	B) MAD	
	C) Quartiles	
	D) IQR	
10-3 Box Plots	A) Five-Number Summary	MAFS.6.SP.2.4
	B) Measures of Variation	
	C) Box Plots, Five-Number Summaries, and Data Sets	
	D) Distribution of Data in a Dot Plot	
10-4 Shapes of Distributions	A) Shapes of Histograms	MAFS.6.G.1.2, MAFS.6.G.1.3, MAFS.6.SP.2.5.c, MAFS.6.SP.2.5.d
	B) Shapes of Dot Plots	
	C) Shape and Measure of Center	
	D) Measure of Center and Measure of Variation	
	E) Outliers and Measures of Center	