

# Knowre Math: **Grade 3** Curriculum

## Chapter 1 Place Value

Lesson	Topic	AZ Standards
1-1 Models of Numbers Less Than 1,000	A) Base Ten Blocks to Write Numbers Between 100 and 1,000	2.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	4.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	4.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	2.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	4.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	3.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	AZ Standards
2-1 Adding without Regrouping	A) Using Base Ten Blocks to Add - No Regrouping	3.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	3.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	3.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	3.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	3.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	3.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	3.NBT.2
	B) Adding Numbers Horizontally - Regrouping	
2-8 Horizontal Subtraction	A) Subtracting Numbers Horizontally - No Regrouping	3.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	AZ Standards
2-9 Adding and Subtracting Three or More Numbers Horizontally	A) Adding Three or More Numbers Horizontally	3.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	3.NBT.2
	B) Missing Numbers in Addition and Subtraction Sentences	
	C) Adding Numbers Vertically - Regrouping	
2-11 Estimating Sums	A) Estimating Sums	3.OA.10
2-12 Estimating Differences	A) Estimating Differences	3.OA.10

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## Chapter 3 Modeling Multiplication

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

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## Chapter 4 Multiplication Fluency

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

## Chapter 5 Modeling Division

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

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## Chapter 6 Division Fluency

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

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## Chapter 7 Mixed Operations and Patterns

Lesson	Topic	AZ Standards
7-1 Multiplication and Division Relationships	A) Relationships Between Multiplication and Division Sentences	3.OA.4, 3.OA.5, 3.OA.6
	B) Missing Numbers in Multiplication and Division Sentences	
7-2 Addition and Subtraction Expressions and Equations	A) Addition and Subtraction Expressions	
7-3 Multiplication and Division Expressions and Equations	A) Multiplication and Division Expressions	3.OA.4
	B) Expressions with More Than One Operation	
7-4 Multiplying or Dividing Three or More Numbers	A) Multiplying Three or More Numbers	3.OA.5, 3.OA.8
	B) Dividing Three or More Numbers	
7-5 Mixed Operations	A) Evaluating Expressions with More Than One Operation	3.OA.8
7-6 Patterns	A) Repeating Patterns	3.OA.9
7-7 Rules and Patterns	A) Patterns and Rules	3.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	3.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	3.OA.5, 3.MD.7.c
7-10 Distributive Property to Multiply	A) Equal Expressions with Split Factors	3.OA.5
	B) Using the Distributive Property to Multiply	

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## Chapter 8 Fractions

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

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## Chapter 9 Measurement

<b>Lesson</b>	<b>Topic</b>	<b>AZ Standards</b>
9-1 Measuring Length - Inches	A) Using Inches to Measure Objects	3.MD.4
9-2 Measuring Length - Feet	A) Using Feet to Measure Objects	3.MD.4
9-3 Measuring Volume - Metric	A) Estimating Metric Units of Volume	3.MD.2
9-4 Measuring Mass - Metric	A) Estimating Metric Units of Mass	3.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	3.MD.1
9-7 Showing Time on an Analog Clock	A) Clockwise and Counterclockwise	3.MD.1
	B) Showing Time on an Analog Clock	
9-8 Elapsed Time - Future	A) Time in a Given Number of Hours and Minutes	3.MD.1
9-9 Elapsed Time - Past	A) Time a Given Number of Hours and Minutes Ago	3.MD.1
9-10 Elapsed Time - Hours and Minutes	A) Elapsed Time	3.MD.1
9-11 Money	A) Values of Sets of Mixed Coins	2.MD.8
	B) Values of Sets of Bills and Coins	

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## Chapter 10 Data

<b>Lesson</b>	<b>Topic</b>	<b>AZ Standards</b>
10-1 Making Pictographs	A) Making Scaled Pictographs	3.MD.3
10-2 Reading Pictographs	A) Using Scaled Pictographs to Make a Frequency Table	3.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	3.MD.3
	B) Making Scaled Bar Graphs	
10-4 Reading Bar Graphs	A) Finding the Frequency in a Scaled Bar Graph	3.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	3.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	AZ Standards
11-1 Attributes of Two-Dimensional Figures	A) Sides, Angles, and Vertices of Two-Dimensional Figures	3.G.1
	B) Identifying Figures with Given Attributes	
11-2 Names of Two-Dimensional Figures	A) Attributes of Figures Given Their Names	3.G.1
11-3 Quadrilaterals	A) Defining Quadrilaterals	3.G.1
	B) Attributes of Rectangles, Rhombuses, and Squares	
11-4 Perimeter	A) Perimeter on a Grid	3.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	3.MD.5.a, 3.MD.5.b, 3.MD.6, 3.MD.7.a, 3.MD.7.b
11-6 Area of Squares and Rectangles	A) Areas of Rectangles and Squares	3.MD.5.b, 3.MD.7.a, 3.MD.7.b
11-7 Area Extensions	A) Shapes with Equal Perimeters or Areas	3.MD.7.d, 3.MD.8
	B) Areas of Figures Composed of Rectangles and Squares	