Mathletics
Missouri Learning Standards

Activities (Courses) and Skill Quests

Grades 3-6

September, 2025

Mathletics

Mathletics

Missouri Learning Standards

Activities (Courses) & Skill Quests
September 2025

Grade 3

3.NBT Number Sense and Operations in Base Ten
3.NBT.A Use place value understanding and properties of operations to perform multi-digit arithmetic.

3.NBT.A.1 Round whole numbers to the nearest 10 or 100.	
Course Topics	**Activities**
NBT—Place value	Nearest Ten?
	Nearest Hundred?
Topics	**Skill Quests**
Round to the nearest 10 or 100	Rounding numbers up to 1000 to the nearest 100
	Rounding numbers up to 1000 to the nearest 10

3.NBT.A.2 Read, write and identify whole numbers within one hundred thousand using base ten numerals, number names and expanded form.	
Course Topics	**Activities**
NBT—Place value	Place Value 3
	Expanded Form
	Expanding Numbers
Topics	**Skill Quests**
Read, write & partition 5-digit numbers	Reading & writing numbers to 5 digits
	Partitioning 5-digit numbers

3.NBT.A.3 Demonstrate fluency with addition and subtraction within 1000.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Add & subtract within 1000	Add & subtract up to 3-digits: number line
	Add & subtract up to 3-digits: jump strategy
	Add & subtract two 2-digits: place value blocks
	Add & subtract up to 3-digits: expanded form
	Add & subtract two 2-digits: compensation

3.NBT.A.4 Multiply whole numbers by multiples of 10 in the range 10-90.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Multiply by a multiple of 10	Multiplying by a multiple of 10

3.NF Number Sense and Operations in Fractions
3.NF.A Develop understanding of fractions as numbers.

3.NF.A.1	
Understand a unit fraction as the quantity formed by one part when a whole is partitioned into equal parts.	
Course Topics	**Activities**
Model Fractions	Model Fractions
Topics	**Skill Quests**
Introduction to fractions	Introducing eighths
	Halves, quarters & eighths of objects or shapes
	Halves, thirds or quarters of shapes: partitioning
	Introducing sixths
	Thirds & sixths of objects, shapes & sets

3.NF.A.2	
Understand that when a whole is partitioned equally, a fraction can be used to represent a portion of the whole. a. Describe the numerator as representing the number of pieces being considered. b. Describe the denominator as the number of pieces that make the whole.	
Course Topics	**Activities**
NF—Fractions	Shade Fractions
	What Fraction Is Shaded 1
	Thirds and Sixths
Topics	**Skill Quests**
The numerator & denominator	Introducing the numerator & denominator

3.NF.A.3	
Represent fractions on a number line. a. Understand the whole is the interval from 0 to 1. b. Understand the whole is partitioned into equal parts. c. Understand a fraction represents the endpoint of the length a given number of partitions from 0.	
Course Topics	**Activities**
NF—Fractions	Counting with Fractions on a Number Line
Topics	**Skill Quests**
Locate unit fractions on a number line	Locating unit fractions on a number line

3.NF.A.4	
Demonstrate that two fractions are equivalent if they are the same size or the same point on a number line.	
Course Topics	**Activities**
NF—Fractions	Shading Equivalent Fractions
Topics	**Skill Quests**
Investigate equivalent fractions	Investigating equivalent fractions

3.NF.A.5
Recognize and generate equivalent fractions using visual models, and justify why the fractions are equivalent.

Course Topics	Activities
NF—Fractions	Uneven partitioned shapes 2
	Part-Whole Rods 2

Topics	Skill Quests
Find simple equivalent fractions	Recognize & generate simple equivalent fractions

3.NF.A.6
Compare two fractions with the same numerator or denominator using the symbols >, = or <, and justify the solution.

Course Topics	Activities
NF—Fractions	Comparing Fractions 1

Topics	Skill Quests
Compare fractions	Comparing fractions: same numerator or denominator

3.NF.A.7
Explain why fraction comparisons are only valid when the two fractions refer to the same whole.

Course Topics	Activities
Teacher directed	

Topics	Skill Quests
Teacher directed	

3.RA Relationships and Algebraic Thinking

3.RA.A Represent and solve problems involving multiplication and division.

3.RA.A.1
Interpret products of whole numbers.

Course Topics	Activities
RA—Multiplication & division	Grouping in Twos
	Grouping in Threes
	Grouping in Fours
	Grouping in Fives
	Grouping in Sixes
	Grouping in Sevens
	Grouping in Eights
	Grouping in Nines
	Grouping in Tens

Topics	Skill Quests
Introduction to multiplication	Multiplying using arrays & repeated addition

3.RA.A.2	
Interpret quotients of whole numbers.	
Course Topics	**Activities**
RA—Multiplication & division	Divide Into Equal Groups
	Dividing Threes
	Dividing Fours
	Dividing Fives
	Dividing Sixes
	Dividing Sevens
	Dividing Eights
	Dividing Nines
	Dividing Tens
Topics	**Skill Quests**
Introduction to division	Dividing by sharing (up to 50)
	Dividing by grouping (up to 50)
	Creating & solving problems involving equal groups
	Using repeated subtraction to divide

3.RA.A.3	
Describe in words or drawings a problem that illustrates a multiplication or division situation.	
Course Topics	**Activities**
RA—Multiplication & division problems	Problems: Times and Divide
	Fill the Jars
	Making Equal Groups
Topics	**Skill Quests**
Teacher directed	

3.RA.A.4	
Use multiplication and division within 100 to solve problems.	
Course Topics	**Activities**
RA—Multiplication & division problems	Fact Families: Multiply and Divide
Topics	**Skill Quests**
Multiplication & division problems	Multiplication problems: fair share/equal grouping
	Multiplication/division problems: arrays

3.RA.A.5	
Determine the unknown number in a multiplication or division equation relating three whole numbers.	
Course Topics	**Activities**
RA—Multiplication & division problems	Word Problems with Letters
Topics	**Skill Quests**
Multiply & divide: finding the unknown	Multiplying & dividing: finding the unknown

3.RA.B Understand properties of multiplication and the relationship between multiplication and division.

3.RA.B.6	
Apply properties of operations as strategies to multiply and divide.	
Course Topics	**Activities**
RA—Multiplication & division problems	Multiplication Turn-Abouts
Topics	**Skill Quests**
Multiplication properties	Multiplication properties

3.RA.C Multiply and divide within 100.

3.RA.C.7	
Multiply and divide with numbers and results within 100 using strategies such as the relationship between multiplication and division or properties of operations. Know all products of two one-digit numbers.	
Course Topics	**Activities**
RA—Multiplication & division problems	Related Facts 2
Topics	**Skill Quests**
Multiplication & division facts	Multiplication facts: 2, 4, 8
	Multiplication facts: 5, 10
	Multiplication facts: 3, 6, 9
	Multiplication facts: 7
	Recalling multiplication facts to 5 x 5
	Recalling multiplication facts to 10 x 10
	Division facts: 2, 4, 8
	Division facts: 5, 10
	Division facts: 3, 6, 9
	Division facts: 7

3.RA.C.8	
Demonstrate fluency with products within 100.	
Course Topics	**Activities**
RA—Multiplication & division problems	Times Tables
Topics	**Skill Quests**
Teacher directed	

3.RA.D Use the four operations to solve word problems.

3.RA.D.9	
Write and solve two-step problems involving variables using any of the four operations.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**

2-step word problems: 4 operations	2-step word problems with the 4 operations

3.RA.D.10
Interpret the reasonableness of answers using mental computation and estimation strategies including rounding.

Course Topics	Activities
RA—Properties of operations	Strategies for Column Addition
Topics	**Skill Quests**
Teacher directed	

3.RA.E Identify and explain arithmetic patterns.

3.RA.E.11
Identify arithmetic patterns and explain the patterns using properties of operations.

Course Topics	Activities
RA—Properties of operations	Addition Properties
	Multiplication Properties
Topics	**Skill Quests**
Number patterns	Identifying & creating number patterns
	Identifying odd & even number patterns
	Exploring number patterns in tables & charts

3.GM Geometry and Measurement
3.GM.A Reason with shapes and their attributes.

3.GM.A.1
Understand that shapes in different categories may share attributes and that the shared attributes can define a larger category.

Course Topics	Activities
GM—Shapes	Shapes
Topics	**Skill Quests**
Shapes & their attributes	Sorting & naming quadrilaterals
	Comparing & describing two-dimensional shapes

3.GM.A.2
Distinguish rhombuses and rectangles as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to these subcategories.

Course Topics	Activities
GM—Shapes	Collect the Shapes 1
	Collect the Shapes 2
Topics	**Skill Quests**
Recognize different quadrilaterals	Recognizing between different quadrilaterals

3.GM.A.3	
Partition shapes into parts with equal areas, and express the area of each part as a unit fraction of the whole.	
Course Topics	**Activities**
GM—Shapes	Relate Shapes and Solids
Topics	**Skill Quests**
Partition shapes	Partitioning shapes into parts with equal areas

3.GM.B Solve problems involving the measurement of time, liquid volumes and weights of objects.

3.GM.B.4	
Tell and write time to the nearest minute.	
Course Topics	**Activities**
GM—Time & mass	What is the Time?
Topics	**Skill Quests**
Tell & write time to the minute	Telling time to the minute, digital & analog
	Using timetables

3.GM.B.5	
Estimate time intervals in minutes.	
Course Topics	**Activities**
GM—Time & mass	Five Minute Times
Topics	**Skill Quests**
Calculate elapsed time	Calculating elapsed time

3.GM.B.6	
Solve problems involving addition and subtraction of minutes.	
Course Topics	**Activities**
GM—Time & mass	Time Mentals
	Elapsed Time
Topics	**Skill Quests**
Teacher directed	

3.GM.B.7	
Measure or estimate length, liquid volume and weight of objects.	
Course Topics	**Activities**
GM—Time & mass	Mass Word Problems
Topics	**Skill Quests**
Length	Estimating & measuring in centimeters
	Estimating & measuring in centimeters & meters
Liquid volume	Estimating, comparing & measuring in liters
	Liquid volume: milliliters
Mass	Mass: kilograms

Mass: grams
Mass: measuring in grams & kilograms

3.GM.B.8 Use the four operations to solve problems involving lengths, liquid volumes or weights given in the same units.	
Course Topics	**Activities**
GM—Time & mass	Cups, Pints, Quarts, Gallons
Topics	**Skill Quests**
Length, volume & weight word problems	Solving measurement-related word problems
	Solving word problems involving liquid volume
	Solving 1-step word problems involving mass

3.GM.C Understand concepts of area.

3.GM.C.9 Calculate area by using unit squares to cover a plane figure with no gaps or overlaps.	
Course Topics	**Activities**
GM—Perimeter & area	Equal Areas
Topics	**Skill Quests**
Measure area with unit squares	Measuring area with unit squares

3.GM.C.10 Label area measurements with squared units.	
Course Topics	**Activities**
GM—Perimeter & area	Area of Shapes
	Calculate Area of Shapes (inches, feet, yards)
Topics	**Skill Quests**
Measure area with formal units	Introducing formal units for area
	Measuring the area of rectangles

3.GM.C.11 Demonstrate that tiling a rectangle to find the area and multiplying the side lengths result in the same value.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Estimate area with tiling	Estimating area with tiling

3.GM.C.12 Multiply whole-number side lengths to solve problems involving the area of rectangles.	
Course Topics	**Activities**
GM—Perimeter & area	Area of Squares and Rectangles
Topics	**Skill Quests**

Find the area with repeated addition	Finding the area of rectangles, repeated addition

3.GM.C.13	
Find rectangular arrangements that can be formed for a given area.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Teacher directed	

3.GM.C.14	
Decompose a rectangle into smaller rectangles to find the area of the original rectangle.	
Course Topics	**Activities**
GM—Perimeter & area	Area: Compound Figures
Topics	**Skill Quests**
Find the area of rectilinear figures	Finding the area of rectilinear figures

3.GM.D Understand concepts of perimeter.

3.GM.D.15	
Solve problems involving perimeters of polygons.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Perimeter problems	Introducing perimeter
	Finding the perimeter of rectangles
	Finding a missing side length given the perimeter
	Finding the perimeter of polygons

3.GM.D.16	
Understand that rectangles can have equal perimeters but different areas, or rectangles can have equal areas but different perimeters.	
Course Topics	**Activities**
GM—Perimeter & area	Perimeter: Squares and Rectangles
	Perimeter Detectives 1
	Perimeter of Shapes
Topics	**Skill Quests**
Perimeter & area	Finding the perimeter & area of rectangles
	Relating perimeter & area

3.DS Data and Statistics

3.DS.A Represent and analyze data.

3.DS.A.1	
Create frequency tables, scaled picture graphs and bar graphs to represent a data set with several categories.	
Course Topics	**Activities**
DS—Represent & interpret data	Making Picture graphs: With Scale
	Picture Graphs: with scale & half symbols
Topics	**Skill Quests**
Scaled picture & bar graphs	Reading & representing data: scaled picture graph
	Reading & representing data: scaled bar graph

3.DS.A.2	
Solve one-and two-step problems using information presented in bar and/or picture graphs.	
Course Topics	**Activities**
DS—Represent & interpret data	Pictographs
	Bar Graphs 1
	Bar Graphs 2
Topics	**Skill Quests**
Teacher directed	

3.DS.A.3	
Create a line plot to represent data.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Create line plots	Creating line plots

3.DS.A.4	
Use data shown in a line plot to answer questions.	
Course Topics	**Activities**
DS—Represent & interpret data	Line Plots
Topics	**Skill Quests**
Represent & read data in a line plot	Representing & reading data in a line plot

Grade 4

4.NBT Number Sense and Operations in Base Ten
4.NBT.A Use place value understanding and properties of operations to perform multi-digit arithmetic with numbers up to one million.

4.NBT.A.1	
Round multi-digit whole numbers to any place.	
Course Topics	**Activities**
NBT—Place value	Rounding Numbers
	Nearest Thousand?
Topics	**Skill Quests**
Round 6-digit numbers	Rounding 6-digit numbers to any place value

4.NBT.A.2	
Read, write and identify multi-digit whole numbers up to one million using number names, base ten numerals and expanded form.	
Course Topics	**Activities**
NBT—Place value	Numbers from Words to Digits 1
	Numbers from Words to Digits 2
	Expanded Notation
	Expanding Numbers
Topics	**Skill Quests**
Read & write multi-digit numbers	Reading & writing multi-digit numbers

4.NBT.A.3	
Compare two multi-digit numbers using the symbols >, = or <, and justify the solution.	
Course Topics	**Activities**
NBT—Place value	Greater Than or Less Than?
	Comparing Numbers
Topics	**Skill Quests**
Compare two 6-digit numbers	Comparing two 6-digit numbers

4.NBT.A.4	
Understand that in a multi-digit whole number, a digit represents 10 times what it would represent in the place to its right.	
Course Topics	**Activities**
NBT—Place value	Multiply Multiples of 10
	Place Value 1 (×10 and ÷10)
	Place Value 2 (×10 and ÷10)
	Multiplying by 10, 100, 1000
Topics	**Skill Quests**

Place value for multi-digit numbers	Generalizing place value understanding

4.NBT.A.5 Demonstrate fluency with addition and subtraction of whole numbers.	
Course Topics	**Activities**
NBT—Addition & subtraction	Add Two 2-Digit Numbers: Regroup
	Add 3-Digit Numbers: Regroup
	Add Multi-Digit Numbers 1
	Add Multi-Digit Numbers 2
	Adding Colossal Columns
	Subtracting Colossal Columns
	2-Digit Differences: Regroup
	3-Digit Differences: 1 Regrouping
	3-Digit Differences with Zeros
Topics	**Skill Quests**
Add multi-digit numbers	Adding multi-digit numbers, no regrouping
	Adding multi-digit numbers, regrouping
Subtract multi-digit numbers	Subtracting multi-digit numbers, no regrouping
	Subtracting multi-digit numbers, regrouping

4.NBT.A.6 Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, and justify the solution.	
Course Topics	**Activities**
NBT—Multiplication & division	Multiply 2 Digits Area Model
	Contracted Multiplication
Topics	**Skill Quests**
Multiply multi-digit numbers	Multiplying multi-digit numbers, algorithm
	Multiplying multi-digit numbers using place value
	Multiplying multi-digit numbers, area model

4.NBT.A.7 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, and justify the solution.	
Course Topics	**Activities**
NBT—Multiplication & division	Divide: 1-Digit Divisor 1
	Divide: 1-Digit Divisor 2
Topics	**Skill Quests**
Divide multi-digit numbers	Dividing numbers, place value blocks
	Dividing numbers, area model
	Dividing numbers, place value strategy
	Introducing remainders in division

4.NF Number Sense and Operations in Fractions
4.NF.A Extend understanding of fraction equivalence and ordering.

4.NF.A.1	
Explain and/or illustrate why two fractions are equivalent.	
Course Topics	**Activities**
NF—Fractions	The Equivalent Fraction
Topics	**Skill Quests**
Fraction equivalence	Equivalent fractions with models

4.NF.A.2	
Recognize and generate equivalent fractions.	
Course Topics	**Activities**
NF—Fractions	Equivalent Fraction Wall 1
Topics	**Skill Quests**
Generate equivalent fractions	Equivalent fractions with multiplication

4.NF.A.3	
Compare two fractions using the symbols >, = or <, and justify the solution.	
Course Topics	**Activities**
NF—Fractions	Compare Fractions 1a
	Compare Fractions 1b
Topics	**Skill Quests**
Compare fractions	Compare fractions using models
	Compare fractions, different numerator/denominator
	Compare fractions using common denominators

4.NF.B Extend understanding of operations on whole numbers to fraction operations.

4.NF.B.4	
Understand addition and subtraction of fractions as joining/composing and separating/decomposing parts referring to the same whole.	
Course Topics	**Activities**
NF—Fractions	Add Like Mixed Numbers
Topics	**Skill Quests**
Understand adding/subtracting fractions	Adding unit fractions, same denominators: models
	Adding fractions, same denominator
	Subtracting fractions, same denominator
	Adding & subtracting fractions, same denominator

4.NF.B.5	
Decompose a fraction into a sum of fractions with the same denominator and record each decomposition with an equation and justification.	
Course Topics	**Activities**

NF—Fractions	Unit Fractions
Topics	**Skill Quests**
Decompose fractions	Decomposing fractions

4.NF.B.6
Solve problems involving adding and subtracting fractions and mixed numbers with like denominators.

Course Topics	**Activities**
NF—Fractions	Add Subtract Fractions 1
Topics	**Skill Quests**
Add & subtract mixed numbers	Adding mixed numbers, same denominator
	Subtracting mixed numbers, same denominator

4.NF.B.7
Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.

Course Topics	**Activities**
NF—Fractions	Multiply Fraction by Whole Number
Topics	**Skill Quests**
Multiply a fraction by a whole number	Multiplying a fraction by a whole number

4.NF.B.8
Solve problems involving multiplication of a fraction by a whole number.

Course Topics	**Activities**
NF—Fractions	Model Fractions to Multiply
Topics	**Skill Quests**
Teacher directed	

4.NF.C Understand decimal notation for fractions, and compare decimal fractions. (Denominators of 10 or 100.)

4.NF.C.9
Use decimal notation for fractions with denominators of 10 or 100.

Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Fractions as decimals	Introducing tenths
	Introducing hundredths

4.NF.C.10
Understand that fractions and decimals are equivalent representations of the same quantity.

Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**

Know fraction & decimal equivalence	Knowing common fraction & decimal equivalences

4.NF.C.11	
Read, write and identify decimals to the hundredths place using number names, base ten numerals and expanded form.	
Course Topics	**Activities**
NF—Decimals	Decimals from Words to Digits 1
	Decimals from Words to Digits 2
Topics	**Skill Quests**
Introduce decimal notation	Introducing decimal notation

4.NF.C.12	
Compare two decimals to the hundredths place using the symbols >, = or <, and justify the solution.	
Course Topics	**Activities**
NF—Decimals	Comparing Decimals 1
	Decimal Order 1
	Decimal Order 2
	Decimals on the Number Line
Topics	**Skill Quests**
Compare decimals to hundredths	Comparing & ordering decimals to hundredths

4.RA Relationships and Algebraic Thinking
4.RA.A Use the four operations with whole numbers to solve problems.

4.RA.A.1	
Multiply or divide to solve problems involving a multiplicative comparison.	
Course Topics	**Activities**
RA—Algebra & patterns	Problems: Multiply and Divide
Topics	**Skill Quests**
Comparison word problems	Solving comparison word problems

4.RA.A.2	
Solve multi-step whole number problems involving the four operations and variables and using estimation to interpret the reasonableness of the answer.	
Course Topics	**Activities**
RA—Algebra & patterns	Word Problems with Letters
Topics	**Skill Quests**
Word problems: 4 operations	Multi-step multiplication/division word problems
	Solving multiplication word problems
	2-step addition & subtraction word problems

4.RA.A.3	
Solve whole number division problems involving variables in which remainders need to be interpreted, and justify the solution.	
Course Topics	**Activities**
RA—Algebra & patterns	Remainders by Arrays
	Remainders by Tables
Topics	**Skill Quests**
Solve division word problems	Solving division word problems

4.RA.B Recognize that a whole number is a multiple of each of its factors and find the multiples for a given whole number.

4.RA.B.4	
Recognize that a whole number is a multiple of each of its factors and find the multiples for a given whole number.	
Course Topics	**Activities**
RA—Algebra & patterns	Multiples
	Factors
	Find the Factor
Topics	**Skill Quests**
Factors & multiples	Finding multiples: whole numbers up to 100
	Finding factors: whole numbers up to 100

4.RA.B.5	
Determine if a whole number within 100 is composite or prime, and find all factor pairs for whole numbers within 100.	
Course Topics	**Activities**
RA—Algebra & patterns	Prime or Composite?
Topics	**Skill Quests**
Prime & composite numbers	Prime & composite numbers

4.RA.C Generate and analyze patterns.

4.RA.C.6	
Generate a number pattern that follows a given rule.	
Course Topics	**Activities**
RA—Algebra & patterns	Increasing Patterns
	Decreasing Patterns
Topics	**Skill Quests**
Number & shape patterns	Generate shape patterns from a given rule
	Generate addition patterns from a given rule
	Generate subtraction patterns from a given rule
	Generate multiplication patterns from a given rule

4.RA.C.7	
Use words or mathematical symbols to express a rule for a given pattern.	
Course Topics	**Activities**
RA—Algebra & patterns	Describing Patterns
Topics	**Skill Quests**
Teacher directed	

4.GM Geometry and Measurement

4.GM.A Classify 2-dimensional shapes by properties of their lines and angles.

4.GM.A.1	
Draw and identify points, lines, line segments, rays, angles, perpendicular lines and parallel lines.	
Course Topics	**Activities**
GM—Shapes, lines & angles	What Pair of Lines Am I?
	Sides, Angles and Diagonals
Topics	**Skill Quests**
Spatial features in 2-D figures	Classifying angles
	Labeling points & lines
	Identifying spatial features in 2-D shapes

4.GM.A.2	
Classify two-dimensional shapes by their sides and/or angles.	
Course Topics	**Activities**
GM—Shapes, lines & angles	Triangles: Acute, Right, Obtuse
Topics	**Skill Quests**
Classify 2-D figures	Classifying plane shapes by their spatial features
	Classifying triangles by their sides & angles

4.GM.A.3	
Construct lines of symmetry for a two-dimensional figure.	
Course Topics	**Activities**
GM—Shapes, lines & angles	Lines of Symmetry
Topics	**Skill Quests**
Lines of symmetry	Lines of symmetry

4.GM.B Understand the concepts of angle and measure angles

4.GM.B.4	
Draw and identify points, lines, line segments, rays, angles, perpendicular lines and parallel lines.	
Course Topics	**Activities**
GM—Shapes, lines & angles	Classifying Angles
	What Type of Angle?
Topics	**Skill Quests**
Teacher directed	

4.GM.B.5	
Classify two-dimensional shapes by their sides and/or angles.	
Course Topics	**Activities**
GM—Shapes, lines & angles	Right Angle Relation
	Estimating Angles
Topics	**Skill Quests**
Measure & estimate angles	Measuring & estimating angles

4.GM.C Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

4.GM.C.6	
Know relative sizes of measurement units within one system of units. Convert measurements in a larger unit in terms of a smaller unit.	
Course Topics	**Activities**
GM—Measurement units	Inches, Feet, Yards
	Ounces and Pounds
	Cups, Pints, Quarts, Gallons
	Customary Units of Length
	Customary Units of Capacity
	Meters and Kilometers
	Converting cm and mm
	Grams and Kilograms Conversion
Topics	**Skill Quests**
Convert units of measure	Units of length: mm/cm/m/km
	Units of mass: g/kg & oz/lb
	Units of time: sec/min/hr & day/week/year
	Units of volume & capacity: mL/L

4.GM.C.7	
Use the four operations to solve problems involving distances, intervals of time, liquid volume, weight of objects and money.	
Course Topics	**Activities**
GM—Measurement units	Customary Units of Weight 1
	Customary Units of Weight 2
	Money Problems: Four Operations
	Making Change (USD)
Topics	**Skill Quests**
Word problems: units of measure	Length word problems
	Mass word problems
	Elapsed time word problems
	Volume & capacity word problems
	Money word problems

4.GM.C.8	
Apply the area and perimeter formulas for rectangles to solve problems.	
Course Topics	**Activities**
GM—Measurement units	Area: Squares and Rectangles
	Perimeter: Squares and Rectangles
Topics	**Skill Quests**
Area & perimeter	Finding the area of a rectangle, formula
	Finding the perimeter of a rectangle, formula

4.DS Data and Statistics
4.DS.A Represent and analyze data.

4.DS.A.1	
Create a frequency table and/or line plot to display measurement data.	
Course Topics	**Activities**
DS—Represent & interpret data	Line Plots
Topics	**Skill Quests**
Create line plots	Creating line plots

4.DS.A.2	
Solve problems involving addition and subtraction by using information presented in a data display.	
Course Topics	**Activities**
DS—Represent & interpret data	Bar Graphs 1
	Bar Graphs 2
Topics	**Skill Quests**
Create & analyze data displays	Creating & analyzing data displays

4.DS.A.3	
Analyze the data in a frequency table, line plot, bar graph or picture graph.	
Course Topics	**Activities**
DS—Represent & interpret data	Making Picture Graphs: With Scale
	Picture Graphs: with scale & half symbols
	Pictographs
Topics	**Skill Quests**
Analyze data	Analyzing data in tables & picture graphs

Grade 5

5.NBT Number Sense and Operations in Base Ten
5.NBT.A Use place value system understanding to perform operations with multi-digit whole numbers to billions and decimals to thousandths.

5.NBT.A.1	
Read, write and identify numbers from billions to thousandths using number names, base ten numerals and expanded form.	
Course Topics	**Activities**
NBT—Place value	Place Value to Millions
	Place Value to Billions
Topics	**Skill Quests**
Read, write & identify numbers: any size	Reading, writing & identifying numbers: any size

5.NBT.A.2	
Round multi-digit whole numbers to any place.	
Course Topics	**Activities**
NBT—Place value	Comparing Numbers
	Equal, less or Greater Than?
Topics	**Skill Quests**
Compare & order numbers	Comparing & ordering numbers of any size

5.NBT.A.3	
Understand that in a multi-digit number, a digit represents 1/10 times what it would represent in the place to its left.	
Course Topics	**Activities**
NBT—Place value	Place Value 2 (×10 and ÷10)
Topics	**Skill Quests**
The place value system	Identifying the place value of a digit in a number
	Understanding the place value system: powers of 10

5.NBT.A.4	
Evaluate the value of powers of 10 and understand the relationship to the place value system.	
Course Topics	**Activities**
NBT—Place value	Multiply Decimals and Powers of 10
Topics	**Skill Quests**
Multiply & divide by powers of 10	Multiplying decimals by powers of 10
	Dividing decimals by powers of 10
	Finding numbers before & after using powers of 10
	Writing numbers using powers of 10

5.NBT.A.5	
Round numbers from billions to thousandths place.	
Course Topics	**Activities**
NBT—Place value	Rounding off Numbers
	Nearest Thousand?
Topics	**Skill Quests**
Round numbers	Rounding whole numbers
	Rounding decimal numbers

5.NBT.A.6	
Add and subtract multi-digit whole numbers and decimals to the thousandths place, and justify the solution.	
Course Topics	**Activities**
NBT—Place value	Add Decimals 1
	Subtract Decimals 1
Topics	**Skill Quests**
Operations with decimals	Adding decimals to hundredths, algorithm
	Subtracting decimals using mental strategies
	Subtracting decimals to hundredths, algorithm

5.NBT.A.7	
Multiply multi-digit whole numbers and decimals to the hundredths place, and justify the solution.	
Course Topics	**Activities**
NBT—Place value	Decimal by Whole Number
Topics	**Skill Quests**
Multiply decimals & whole numbers	Multiplying decimals & whole numbers
	Multiplying decimals to hundredths, algorithm
	Multiplying decimals using mental strategies
	Multiplicative relationships with decimals

5.NBT.A.8	
Divide multi-digit whole numbers and decimals to the hundredths place using up to two-digit divisors and four-digit dividends, and justify the solution.	
Course Topics	**Activities**
NBT—Place value	Divide Decimal by Whole Number
Topics	**Skill Quests**
Divide whole numbers & decimals	Divide whole numbers & decimals, mental strategies
	Dividing whole numbers & decimals, algorithm

5.NF Number Sense and Operations in Fractions

5.NF.A Understand the relationship between fractions and decimals (denominators that are factors of 100).

5.NF.A.1

Understand that parts of a whole can be expressed as fractions and/or decimals.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Teacher directed	

5.NF.A.2	
Convert decimals to fractions and fractions to decimals.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Convert between fractions & decimals	Converting between fractions & decimals

5.NF.A.3	
Compare and order fractions and/or decimals to the thousandths place using the symbols >, = or <, and justify the solution.	
Course Topics	**Activities**
NF—Fractions	Ordering Fractions 1
	Arranging Fractions
	Comparing Decimals 1
Topics	**Skill Quests**
Compare decimals to thousandths	Comparing & ordering decimals to thousandths

5.NF.B Perform operations and solve problems with fractions and decimals.

5.NF.B.4	
Estimate results of sums, differences and products with fractions and decimals to the thousandths.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Teacher directed	

5.NF.B.5a	
Justify the reasonableness of a product when multiplying with fractions. Estimate the size of the product based on the size of the two factors.	
Course Topics	**Activities**
NF—Fractions	Multiply Two Fractions 1
	Multiply Fraction by Fraction
	Estimate Products with Fractions
Topics	**Skill Quests**
Teacher directed	

5.NF.B.5b

Justify the reasonableness of a product when multiplying with fractions. Explain why multiplying a given number by a fraction greater than 1 results in a product larger than the given number.

Course Topics	Activities
NF—Fractions	Multiply Two Fractions 1
	Multiply Fraction by Fraction
	Estimate Products with Fractions

Topics	Skill Quests
Effects of multiplying fractions	Interpreting multiplying fractions as scaling

5.NF.B.5c

Explain why multiplying a given number by a fraction less than 1 results in a product smaller than the given number.

Course Topics	Activities
NF—Fractions	Multiply Two Fractions 1
	Multiply Fraction by Fraction
	Estimate Products with Fractions

Topics	Skill Quests
Teacher directed	

5.NF.B.5d

Explain why multiplying the numerator and denominator by the same number is equivalent to multiplying the fraction by 1.

Course Topics	Activities
NF—Fractions	Multiply Two Fractions 1
	Multiply Fraction by Fraction
	Estimate Products with Fractions

Topics	Skill Quests
Teacher directed	

5.NF.B.6

Solve problems involving addition and subtraction of fractions and mixed numbers with unlike denominators, and justify the solution.

Course Topics	Activities
NF—Fractions	Add Unlike Fractions
	Add Unlike Mixed Numbers
	Add: No Common Denominator
	Subtract Unlike Fractions

Topics	Skill Quests
Add & subtract fractions	Adding fractions & mixed numbers
	Subtracting fractions & mixed numbers
	Adding & subtracting fractions & mixed numbers
	Adding fractions, proper & improper
	Adding mixed numbers
	Subtracting fractions, proper & improper
	Subtracting mixed numbers

5.NF.B.7a

Extend the concept of multiplication to multiply a fraction or whole number by a fraction. Recognize the relationship between multiplying fractions and finding the areas of rectangles with fractional side lengths.

Course Topics	Activities
Teacher directed	
Topics	**Skill Quests**
Area of a rectangle, fractional sides	Find the area of a rectangle with fractional sides

5.NF.B.7b

Extend the concept of multiplication to multiply a fraction or whole number by a fraction. Calculate and interpret the product of a fraction by a whole number and a whole number by a fraction.

Course Topics	Activities
NF—Fractions	Multiply Fraction by Whole Number
	Multiply: Whole Number and Fraction
Topics	**Skill Quests**
Multiply fractions	Multiplying a fraction by a whole number
	Multiplying a fraction by a fraction

5.NF.B.7c

Extend the concept of multiplication to multiply a fraction or whole number by a fraction. Calculate and interpret the product of two fractions less than one.

Course Topics	Activities
NF—Fractions	Model Fractions to Multiply
Topics	**Skill Quests**
Teacher directed	

5.NF.B.8a

Extend the concept of division to divide unit fractions and whole numbers by using visual fraction models and equations. Calculate and interpret the quotient of a unit fraction by a non-zero whole number.

Course Topics	Activities
Teacher directed	
Topics	**Skill Quests**
Divide unit fractions by whole numbers	Dividing unit fractions by whole numbers, models

5.NF.B.8b

Extend the concept of division to divide unit fractions and whole numbers by using visual fraction models and equations. Calculate and interpret the quotient of a whole number by a unit fraction.

Course Topics	Activities
Teacher directed	
Topics	**Skill Quests**
Divide whole numbers by unit fractions	Dividing whole numbers by unit fractions, models

5.RA Relationships and Algebraic Thinking
5.RA.A Represent and analyze patterns and relationships.

5.RA.A.1a	
Investigate the relationship between two numeric patterns.	
Generate two numeric patterns given two rules.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Numerical patterns	Comparing 2 numerical patterns
	Interpreting & creating a number pattern table

5.RA.A.1b	
Investigate the relationship between two numeric patterns.	
Translate two numeric patterns into two sets of ordered pairs.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Graph numerical patterns	Graphing ordered pairs from numerical patterns

5.RA.A.1c	
Investigate the relationship between two numeric patterns.	
Graph numeric patterns on the Cartesian coordinate plane.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Teacher directed	

5.RA.A.1d	
Investigate the relationship between two numeric patterns.	
Identify the relationship between two numeric patterns.	
Course Topics	**Activities**
RA—Algebra & patterns	Fit the Conditions 1
Topics	**Skill Quests**
Teacher directed	

5.RA.A.2	
Write a rule to describe or explain a given numeric pattern.	
Course Topics	**Activities**
RA—Algebra & patterns	Table of Values
	Describing Patterns
	Count Forward Patterns
	Count Backward Patterns
Topics	**Skill Quests**

Write pattern rules	Writing increasing & decreasing pattern rules

5.RA.B Write and interpret numerical expressions.

5.RA.B.3 Write, evaluate and interpret numeric expressions using the order of operations.	
Course Topics	**Activities**
RA—Algebra & patterns	Order of Operations 1 (PEDMAS)
	Order of Operations 2 (PEDMAS)
	Identifying errors in applying the order of operations
Topics	**Skill Quests**
Write & interpret expressions	Writing & interpreting expressions without solving

5.RA.B.4 Translate written expressions into algebraic expressions.	
Course Topics	**Activities**
RA—Algebra & patterns	Multiply and Divide Problems 1
Topics	**Skill Quests**
Write algebraic expressions	Writing algebraic expressions

5.RA.C Use the four operations to represent and solve problems.

5.RA.C.5 Solve and justify multi-step problems involving variables, whole numbers, fractions and decimals.	
Course Topics	**Activities**
RA—Algebra & patterns	Word Problems with Letters
Topics	**Skill Quests**
Teacher directed	

5.GM Geometry and Measurement
5.GM.A Classify two- and three-dimensional geometric shapes.

5.GM.A.1 Understand that attributes belonging to a category of figures also belong to all subcategories.	
Course Topics	**Activities**
GM—Shapes	Properties of Quadrilaterals
Topics	**Skill Quests**
Attributes of 2-D figures	Sorting plane shapes

5.GM.A.2 Classify figures in a hierarchy based on properties.	
Course Topics	**Activities**
Teacher directed	

Topics	Skill Quests
Classify 2-D figures, properties	Classifying 2-D figures in a hierarchy
	Classifying quadrilaterals

5.GM.A.3
Analyze and describe the properties of prisms and pyramids.

Course Topics	Activities
GM—Shapes	Collect the Objects 2
	Collect the Shapes 2
	How Many Faces?
	How many Edges?
	How many Corners?
Topics	**Skill Quests**
Prisms & pyramids	Investigating properties of prisms & pyramids

5.GM.B Understand and compute volume.

5.GM.B.4a
Understand the concept of volume and recognize that volume is measured in cubic units. Describe a cube with edge length 1 unit as a "unit cube" and is said to have "one cubic unit" of volume and can be used to measure volume.

Course Topics	Activities
GM—Shapes	Volume of Solids and Prisms - 1cm³ blocks
	How many Blocks?
Topics	**Skill Quests**
Teacher directed	

5.GM.B.4b
Understand the concept of volume and recognize that volume is measured in cubic units. Understand that the volume of a right rectangular prism can be found by stacking multiple layers of the base.

Course Topics	Activities
GM—Shapes	Volume of Solids and Prisms - 1cm³ blocks
	How many Blocks?
Topics	**Skill Quests**
Volume: rectangular prisms	Volume: additive & multiplicative strategies

5.GM.B.5
Apply the formulas $V = l \times w \times h$ and $V = B \times h$ for volume of right rectangular prisms with whole-number edge lengths.

Course Topics	Activities
GM—Shapes	Volume: Rectangular Prisms 1
	Volume: Rectangular Prisms 2
Topics	**Skill Quests**
Volume formulas: rectangular prism	Applying volume formulas for rectangular prisms

5.GM.C Graph points on the Cartesian coordinate plane within the first quadrant to solve problems.

5.GM.C.6a	
Define a first quadrant Cartesian coordinate system. Represent the axes as scaled perpendicular number lines that both intersect at 0, the origin.	
Course Topics	**Activities**
GM—Coordinate plane & measurement	Coordinate Graphs
Topics	**Skill Quests**
The coordinate plane	Introducing the coordinate plane

5.GM.C.6b	
Define a first quadrant Cartesian coordinate system. Identify any point on the Cartesian coordinate plane by its ordered pair coordinates.	
Course Topics	**Activities**
GM—Coordinate plane & measurement	Coordinate Graphs
Topics	**Skill Quests**
Locate & plot points in the 1st quadrant	Locating & plotting points in the 1st quadrant

5.GM.C.6c	
Define a first quadrant Cartesian coordinate system. Define the first number in an ordered pair as the horizontal distance from the origin.	
Course Topics	**Activities**
GM—Coordinate plane & measurement	Coordinate Graphs
Topics	**Skill Quests**
Teacher directed	

5.GM.C.6d	
Define a first quadrant Cartesian coordinate system. Define the second number in an ordered pair as the vertical distance from the origin.	
Course Topics	**Activities**
GM—Coordinate plane & measurement	Coordinate Graphs
Topics	**Skill Quests**
Teacher directed	

5.GM.C.7	
Plot and interpret points in the first quadrant of the Cartesian coordinate plane.	
Course Topics	**Activities**
GM—Coordinate plane & measurement	Coordinate Graphs: 1st Quadrant
Topics	**Skill Quests**
Graph in the first quadrant	Graphing in the first quadrant

5.GM.D Solve problems involving measurement and conversions within a measurement system.

5.GM.D.8	
Convert measurements of capacity, length and weight within a given measurement system.	
Course Topics	**Activities**
GM—Coordinate plane & measurement	Converting Units of Length
	Customary Units of Length
	Operations with Length
	Meters and Kilometers
	Customary Units of Weight 1
	Milliliters and Liters
	Converting Units of Mass
Topics	**Skill Quests**
Convert measurement units	Converting between standard metric units of length
	Converting between standard metric units of mass
	Converting metric units of volume & capacity
	Converting between customary units of length
	Converting customary units of volume & capacity
	Converting between customary units of mass

5.GM.D.9	
Solve multi-step problems that require measurement conversions.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Multi-step conversion problems	Word problems: measurement conversions

5.DS Data and Statistics
5.DS.A Represent and analyze data.

5.DS.A.1	
Create a line graph to represent a data set, and analyze the data to answer questions and solve problems.	
Course Topics	**Activities**
DS—Represent & interpret data	Line Plots
Topics	**Skill Quests**
Represent & read data in a line graph	Representing & reading data in a line graph

5.DS.A.2	
Create a line plot to represent a given or generated data set, and analyze the data to answer questions and solve problems, recognizing the outliers and generating the median.	
Course Topics	**Activities**
DS—Represent & interpret data	Line Graphs: Reading
Topics	**Skill Quests**
Fraction problems: line plots	Represent & interpret measurements: line plots

Grade 6

6.RP Ratios and Proportional Relationships
6.RP.A Understand and use ratios to solve problems.

6.RP.A.1	
Understand a ratio as a comparison of two quantities and represent these comparisons.	
Course Topics	**Activities**
RP- Ratios & Proportional Relationships	Ratios
	Equivalent Ratios
Topics	**Skill Quests**
Introduction to ratios	Defining, understanding & writing ratios

6.RP.A.2	
Understand the concept of a unit rate associated with a ratio, and describe the meaning of unit rate.	
Course Topics	**Activities**
RP- Ratios & Proportional Relationships	Rates
	Proportional Relationships
Topics	**Skill Quests**
Introduction to unit rate	Understanding unit rates & making comparisons

6.RP.A.3a	
Solve problems involving ratios and rates. Create tables of equivalent ratios, find missing values in the tables and plot the pairs of values on the Cartesian coordinate plane.	
Course Topics	**Activities**
RP- Ratios & Proportional Relationships	Ratio Word Problems
Topics	**Skill Quests**
Ratio tables	Creating tables of equivalent ratios
	Plotting coordinates from ratio tables

6.RP.A.3b	
Solve problems involving ratios and rates. Solve unit rate problems.	
Course Topics	**Activities**
RP- Ratios & Proportional Relationships	Rate Word Problems
	Average Speed
	Best Buy
Topics	**Skill Quests**
Unit rate	Solving unit rate problems for given time periods
	Solving unit rate problems involving unit pricing

6.RP.A.3c
Solve problems involving ratios and rates. Solve percent problems.

Course Topics	Activities
RP- Ratios & Proportional Relationships	Percentage of an amount using fractions (<100%)
	Quantities to Percentages (no units)
	Solve Percent Equations
	Percentage Word Problems
Topics	**Skill Quests**
Percent of a quantity	Expressing rates as a percent
	Solving percent problems: finding the whole

6.RP.A.3d
Solve problems involving ratios and rates. Convert measurement units within and between two systems of measurement.

Course Topics	Activities
RP- Ratios & Proportional Relationships	Customary Units of Length
	Customary Units of Capacity
	Customary Units of Weight 1
	Customary Units of Weight 2
Topics	**Skill Quests**
Convert measurements using ratios	Converting measurement units using ratios

6.NS Number Sense and Operations
6.NS.A Understand and use ratios to solve problems.

6.NS.A.1a
Compute and interpret quotients of positive fractions. Solve problems involving division of fractions by fractions.

Course Topics	Activities
NS- The Number System 1-4	Dividing Fractions
	Divide Whole Number by Fraction
Topics	**Skill Quests**
Divide fractions	Dividing a fraction by a fraction
	Dividing fractions & mixed numbers
	Solving word problems: division of fractions

6.NS.B Compute with non-negative multi-digit numbers, and find common factors and multiples.

6.NS.B.2
Demonstrate fluency with division of multi-digit whole numbers.

Course Topics	Activities
NS- The Number System 1-4	Divide: 1-Digit Divisor 2
	Divide: 2-Digit Divisor, Remainder
	Long Division
Topics	**Skill Quests**

Divide multi-digit numbers, algorithm	Divide 4-digit by 2-digit numbers, no remainder
	Divide 4-digit by 2-digit numbers, with remainders
	Divide 4-digit by 2-digit numbers

6.NS.B.3
Demonstrate fluency with addition, subtraction, multiplication and division of decimals.

Course Topics	Activities
NS- The Number System 1-4	Adding Decimals
	Subtracting Decimals
	Adding and Subtracting Decimals
	Multiply Decimal by Decimal
	Divide Decimal by Whole Number
	Divide Decimal by Decimal
Topics	**Skill Quests**
Operations with multi-digit decimals	Adding decimals using the standard algorithm
	Subtracting decimals using the standard algorithm
	Multiplying decimals using the standard algorithm
	Dividing decimals using the standard algorithm
	Word problems: adding & subtracting decimals
	Word problems: multiplying & dividing decimals

6.NS.B.4a
Find common factors and multiples. Find the greatest common factor (GCF) and the least common multiple (LCM).

Course Topics	Activities
NS- The Number System 1-4	Find the Factor
	Greatest Common Factor
	Least Common Multiple
Topics	**Skill Quests**
GCF & LCM	Greatest common factor
	Least common multiple
	Solving word problems: factors & multiples

6.NS.B.4b
Find common factors and multiples. Use the distributive property to express a sum of two whole numbers with a common factor as a multiple of a sum of two whole numbers.

Course Topics	Activities
NS- The Number System 1-4	Multiples
Topics	**Skill Quests**
Factor using the distributive property	Factoring using the distributive property

6.NS.C Apply and extend previous understandings of numbers to the system of rational numbers.

6.NS.C.5	
Use positive and negative numbers to represent quantities.	
Course Topics	**Activities**
NS- The Number System 5-8	Integers on a Number Line
	Ordering Integers (Number Line)
Topics	**Skill Quests**
Positive & negative numbers	Investigating & interpreting integers

6.NS.C.6a	
Locate a rational number as a point on the number line. Locate rational numbers on a horizontal or vertical number line.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Graph rational numbers	Placing rational numbers on the number line
	Graphing rational numbers on the coordinate plane

6.NS.C.6b	
Locate a rational number as a point on the number line. Write, interpret and explain problems of ordering of rational numbers.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Order rational numbers	Exploring the everyday language of integers
	Statements of order: rational numbers

6.NS.C.6c	
Understand that a number and its opposite (additive inverse) are located on opposite sides of zero on the number line.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Teacher directed	

6.NS.C.7	
Understand that the absolute value of a rational number is its distance from 0 on the number line.	
Course Topics	**Activities**
NS- The Number System 5-8	Absolute Value
Topics	**Skill Quests**
Introduction to absolute value	Introducing absolute value

6.NS.C.8
Extend prior knowledge to generate equivalent representations of rational numbers between fractions, decimals and percentages (limited to terminating decimals and/or benchmark fractions of 1/3 and 2/3).

Course Topics	Activities
NS- The Number System 5-8	Percents to Fractions
	Match Decimals and Percentages
	Mixed decimal, percentage and fraction conversions
Topics	**Skill Quests**
Equivalent representations	Finding equivalent representations

6.EEI Expressions, Equations and Inequalities
6.EEI.A Apply and extend previous understandings of arithmetic to algebraic expressions.

6.EEI.A.1
Describe the difference between an expression and an equation.

Course Topics	Activities
Teacher directed	
Topics	**Skill Quests**
Teacher directed	

6.EEI.A.2
Create and evaluate expressions involving variables and whole number exponents.

Course Topics	Activities
EEI- Expressions & Equations	Writing Algebraic Expressions
	Simple Substitution 1
Topics	**Skill Quests**
Teacher directed	

6.EEI.A.2a
Identify parts of an expression using mathematical terminology.

Course Topics	Activities
Teacher directed	
Topics	**Skill Quests**
Parts of an expression	Identifying parts of an expression

6.EEI.A.2b
Evaluate expressions at specific values of the variables.

Course Topics	Activities
EEI- Expressions & Equations	I am Thinking of a Number!
	Simple Substitution 1
Topics	**Skill Quests**
Evaluate algebraic expressions	Evaluating algebraic expressions
	Evaluating expressions using order of operations

6.EEI.A.2c	
Evaluate non-negative rational number expressions.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Evaluate rational number expressions	Evaluating rational number expressions

6.EEI.A.2d	
Write and evaluate algebraic expressions.	
Course Topics	**Activities**
EEI- Expressions & Equations	Writing Algebraic Expressions
Topics	**Skill Quests**
Write algebraic expressions	Writing algebraic expressions

6.EEI.A.2e	
Understand the meaning of the variable in the context of the situation.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Teacher directed	

6.EEI.A.3	
Identify and generate equivalent algebraic expressions using mathematical properties.	
Course Topics	**Activities**
EEI- Expressions & Equations	Solve One-Step Equations
Topics	**Skill Quests**
Equivalent expressions	Identifying equivalent expressions

6.EEI.B Reason about and solve one-variable equations and inequalities.

6.EEI.B.4	
Use substitution to determine whether a given number in a specified set makes a one-variable equation or inequality true.	
Course Topics	**Activities**
EEI- Expressions & Equations	Multiplication Properties
Topics	**Skill Quests**
Test solutions	Testing solutions: equations
	Testing solutions: inequalities

6.EEI.B.5
Understand that if any solutions exist, the solution set for an equation or inequality consists of values that make the equation or inequality true.

Course Topics	Activities
Teacher directed	

Topics	Skill Quests
Teacher directed	

6.EEI.B.6
Write and solve equations using variables to represent quantities, and understand the meaning of the variable in the context of the situation.

Course Topics	Activities
EEI- Expressions & Equations	Writing Equations
	Write an Equation: Word Problems

Topics	Skill Quests
Write & solve an equation	Writing & solving equations

6.EEI.B.7
Solve one-step linear equations in one variable involving non-negative rational numbers.

Course Topics	Activities
EEI- Expressions & Equations	Missing Values: Decimals

Topics	Skill Quests
Solve 1-step equations	Preserving equality in equations
	Solving simple linear equations using models
	1-step equations: add/subtract, positive integers
	1-step equations: add/subtract, rational numbers
	1-step equations: multiply, positive integers
	1-step equations: multiply, rational numbers
	1-step equations: division, rational numbers
	Writing & solving 1-step equations

6.EEI.B.8a
Recognize that inequalities may have infinitely many solutions.
Write an inequality of the form $x > c$, $x < c$, $x \geq c$, or $x \leq c$ to represent a constraint or condition.

Course Topics	Activities
EEI- Expressions & Equations	Solve One-Step Inequalities 1
	Solve One-Step Inequalities 2

Topics	Skill Quests
Write & represent inequalities	Writing inequalities
	Represent algebraic inequalities on a number line

6.EEI.B.8b
Recognize that inequalities may have infinitely many solutions.
Graph the solution set of an inequality.

Course Topics	Activities
EEI- Expressions & Equations	Graphing Inequalities 2

Topics	Skill Quests
Teacher directed	

6.EEI.C Represent and analyze quantitative relationships between dependent and independent variables.

6.EEI.C.9a	
Identify and describe relationships between two variables that change in relationship to one another. Write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Dependent & independent variables	Understanding dependent & independent variables

6.EEI.C.9b	
Identify and describe relationships between two variables that change in relationship to one another. Analyze the relationship between the dependent and independent variables using graphs, tables and equations and relate these representations to each other.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Teacher directed	

6.GM Geometry and Measurement
6.GM.A Solve problems involving area, surface area and volume.

6.GM.A.1	
Find the area of polygons by composing or decomposing the shapes into rectangles or triangles.	
Course Topics	**Activities**
GM- Geometry	Area: Right Triangles
	Area: Triangles
	Area: Parallelograms
	Area: Quadrilaterals
	Area: Compound Figures
Topics	**Skill Quests**
Area: triangles & quadrilaterals	Finding the area of a right triangle
	Investigating the area of special quadrilaterals
	Real-world area problems: special quadrilaterals

6.GM.A.2a	
Find the volume of right rectangular prisms. Understand that the volume of a right rectangular prism can be found by filling the prism with multiple layers of the base.	
Course Topics	**Activities**
GM- Geometry	Volume of Solids and Prisms - 1cm³ blocks
Topics	**Skill Quests**
Volume: rectangular prisms	Calculating the volume of a rectangular prism

6.GM.A.2b	
Find the volume of right rectangular prisms. Apply V = l * w * h and V = Bh to find the volume of right rectangular prisms.	
Course Topics	**Activities**
GM- Geometry	Volume: Rectangular Prisms 1
	Volume: Rectangular Prisms 2
Topics	**Skill Quests**
Volume: rectangular prisms, formula	Volume: rectangular prisms, fraction edge lengths

6.GM.A.3a	
Solve problems by graphing points in all four quadrants of the Cartesian coordinate plane. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the Cartesian coordinate plane.	
Course Topics	**Activities**
GM- Geometry	Number Plane
	Coordinate Graphs
Topics	**Skill Quests**
Graph in the 4 quadrants	Graphing coordinates in the 4 quadrants

6.GM.A.3b	
Solve problems by graphing points in all four quadrants of the Cartesian coordinate plane. Recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.	
Course Topics	**Activities**
GM- Geometry	Number Plane
	Coordinate Graphs
Topics	**Skill Quests**
Graph coordinates across the x- & y-axis	Graphing coordinates across the x-axis & y-axis

6.GM.A.3c	
Solve problems by graphing points in all four quadrants of the Cartesian coordinate plane. Find distances between points with the same first coordinate or the same second coordinate.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Find distances between points	Finding distances between points

6.GM.A.3d	
Solve problems by graphing points in all four quadrants of the Cartesian coordinate plane. Construct polygons in the Cartesian coordinate plane.	
Course Topics	**Activities**
Teacher directed	

Topics	Skill Quests
Polygons in the coordinate plane	Drawing polygons in the coordinate plane

6.GM.A.4a	
Solve problems using nets. Represent three-dimensional figures using nets made up of rectangles and triangles.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Connect 3-D objects with their nets	Connecting 3-D objects with their nets

6.GM.A.4b	
Solve problems using nets. Use nets to find the surface area of three-dimensional figures whose sides are made up of rectangles and triangles.	
Course Topics	**Activities**
GM- Geometry	Nets
	Surface Area: Rectangular Prisms
	Surface Area: Triangular Prisms 1
Topics	**Skill Quests**
Calculate surface area by using nets	Calculating surface area of rectangular prisms

6.DSP Data Analysis, Statistics and Probability
6.DSP.A Develop understanding of statistical variability.

6.DSP.A.1	
Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Statistical questions	Evaluating statistical questions

6.DSP.A.2	
Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread and overall shape.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Shape of data distribution	Introducing the shape of data distribution

<table>
<tr><td colspan="2" align="center">**6.DSP.A.3**
Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary from a single number.</td></tr>
<tr><td align="center">**Course Topics**</td><td align="center">**Activities**</td></tr>
<tr><td colspan="2">Teacher directed</td></tr>
<tr><td align="center">**Topics**</td><td align="center">**Skill Quests**</td></tr>
<tr><td rowspan="5">Measures of center & variation</td><td>Measures of center & variation</td></tr>
<tr><td>Introducing the upper & lower quartiles</td></tr>
<tr><td>Introducing interquartile range</td></tr>
<tr><td>Understanding the median</td></tr>
<tr><td>Understanding the mean</td></tr>
</table>

6.DSP.B Summarize and describe distributions.

<table>
<tr><td colspan="2" align="center">**6.DSP.B.4a**
Display and interpret data. Use dot plots, histograms and box plots to display and interpret numerical data.</td></tr>
<tr><td align="center">**Course Topics**</td><td align="center">**Activities**</td></tr>
<tr><td rowspan="4">DSP - Data Analysis, Statistics & Probability</td><td>Line Plots</td></tr>
<tr><td>Dot Plots</td></tr>
<tr><td>Histograms</td></tr>
<tr><td>Box Plots 1</td></tr>
<tr><td align="center">**Topics**</td><td align="center">**Skill Quests**</td></tr>
<tr><td rowspan="4">Data displays</td><td>Constructing data displays</td></tr>
<tr><td>Reading & interpreting data in a dot plot</td></tr>
<tr><td>Reading & interpreting data in a histogram</td></tr>
<tr><td>Reading & interpreting box plots</td></tr>
</table>

<table>
<tr><td colspan="2" align="center">**6.DSP.B.4b**
Display and interpret data. Create and interpret circle graphs.</td></tr>
<tr><td align="center">**Course Topics**</td><td align="center">**Activities**</td></tr>
<tr><td>DSP - Data Analysis, Statistics & Probability</td><td>Circle Graphs</td></tr>
<tr><td align="center">**Topics**</td><td align="center">**Skill Quests**</td></tr>
<tr><td>Create & interpret circle graphs</td><td>Creating & interpreting circle graphs</td></tr>
</table>

<table>
<tr><td colspan="2" align="center">**6.DSP.B.5**
Display and interpret data. Summarize numerical data sets in relation to the context.</td></tr>
<tr><td align="center">**Course Topics**</td><td align="center">**Activities**</td></tr>
<tr><td colspan="2">Teacher directed</td></tr>
<tr><td align="center">**Topics**</td><td align="center">**Skill Quests**</td></tr>
<tr><td>Summarize numerical data</td><td>Summarizing numerical data</td></tr>
</table>

<table>
<tr><td colspan="2" align="center">**6.DSP.B.5a**
Report the number of observations.</td></tr>
<tr><td align="center">**Course Topics**</td><td align="center">**Activities**</td></tr>
</table>

Teacher directed	
Topics	**Skill Quests**
Report observations	Reporting observations in a data display

6.DSP.B.5b	
Describe the nature of the attribute under investigation, including how it was measured and its units of measurement.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Attributes of data	Describing attributes of data in data displays

6.DSP.B.5c	
Give quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context of the data.	
Course Topics	**Activities**
DSP - Data Analysis, Statistics & Probability	Mean
	Median
	Mode
	Data Extremes and Range
	Calculating Interquartile Range
Topics	**Skill Quests**
Calculate measures of center & variation	Calculating the mean absolute deviation
	Calculating the median
	Calculating the mean
	Identifying clusters, gaps & outliers
	Identifying skewed & symmetrical sets of data

6.DSP.B.5d	
Analyze the choice of measures of center and variability based on the shape of the data distribution and/or the context of the data.	
Course Topics	**Activities**
DSP - Data Analysis, Statistics & Probability	Which Measure of Central Tendency?
Topics	**Skill Quests**
Relate measures of center & variation	Choosing appropriate measures of center/variation
	Comparing measures of center & variation

Mathletics

For more information about Mathletics,
contact our friendly team.

www.mathletics.com/contact

3P Learning