Grade Level: 6 **Course Title: Math** **Topic/Concept: Place Value: Addition and Subtraction**

Time Allotment: 2 weeks **Unit Sequence: 1**

Major Concepts to be learned:

- Place Value
- Addition and Subtraction

Expected Skills to be demonstrated:

- Students will be able to read, write, compare, and understand whole numbers and properties.
- Students will be able to explore algebra.

PA Standards/Anchors:

M6.A.1.2
M6.A.2.1
M6.D.2.2

Eligible Content:

M6.A.1.2.1
M6.A.2.1.1
M6.D.2.2.1

Instructional Strategies:

- Co-Teaching
- Cooperative learning
- Direct instruction/Note taking
- Modeling
- Group Discussion
- Questioning Techniques
- Calculators

Assessments:

- Chapter tests
- Worksheets
- Quizzes

Grade Level: 6 | **Course Title: Math** | **Topic/Concept: Multiply & Divide Whole Numbers**

Time Allotment: 2 weeks | **Unit Sequence: 2**

Major Concepts to be learned:

- Multiply Whole Numbers
- Divide By 1 & 2 Digits
- Exponents
- Order of Operations

Expected Skills to be demonstrated:

- Students will be able to estimate products and quotients of whole numbers.
- Students will be able to mulitiply whole numbers.
- Students will be able to divide whole numbers.

PA Standards/Anchors:	Eligible Content:
M6.A.1.	M6.A.1.2.1 M6.A.1.1.3

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion • Questioning Techniques • Calculators	• Chapter tests • Worksheets • Quizzes

Grade Level: 6 **Course Title: Math** **Topic/Concept: Number Theory**

Time Allotment: 2 weeks **Unit Sequence: 3**

Major Concepts to be learned:

- Prime and Composite Numbers
- Prime Factorization
- Greatest Common Factor
- Least Common Multiple
- Divisibility Rules

Expected Skills to be demonstrated:

- Students will be able to distinguish between prime and composite numbers.
- Students will be able to express composite numbers as products of prime numbers in exponent form.
- Students will be able to find the greatest common factor of two or more numbers.
- Students will be able to find the least common multiple of two or more numbers.

PA Standards/Anchors:	Eligible Content:
M6.A.1	M6.A.1.3.1 M6.A.1.3.2 M6.A.1.3.3

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion/Questioning Techniques • Calculators	• Chapter tests • Worksheets • Quizzes

Grade Level: 6 **Course Title: Math** **Topic/Concept: Fraction and Decimal Concepts**

Time Allotment: 1 week **Unit Sequence: 4**

Major Concepts to be learned:

- Equivalent Fractions
- Compare and Order Fractions and Decimals
- Relate Fractions, Mixed Numbers, and Decimals
- Relate Decimals and Percents

Expected Skills to be demonstrated:

- Students will be able to find equivalent fractions.
- Students will be able to write fractions in equivalent form.
- Students will be able to convert between fractions, mixed numbers, percents, and decimals.
- Students will be able to compare and order fractions, mixed numbers, and decimals.

PA Standards/Anchors:	Eligible Content:
M6.A.1	M6.A.1.1.1,2,4 M6.A.1.2.1

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion/Questioning Techniques • Calculators	• Chapter tests • Worksheets • Quizzes

Grade Level: 6 **Course Title: Math** **Topic/Concept: Add and Subtract Fractions**

Time Allotment: 1 week **Unit Sequence: 5**

Major Concepts to be learned:

- Add and Subtract like/unlike denominators

Expected Skills to be demonstrated:

- Students will be able to add and subtract like/unlike denominators.

PA Standards/Anchors:	Eligible Content:
M6.A.1 M6.A.3	M6.A.3.2.1 M6.A.1.2.1

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion • Questioning Techniques • Calculators	• Chapter tests • Worksheets • Quizzes

Grade Level: 6 | **Course Title: Math** | **Topic/Concept: Multiply and Divide Fractions**

Time Allotment: 1 week | **Unit Sequence: 6**

Major Concepts to be learned:

- Multiply and divide fractions and mixed numbers

Expected Skills to be demonstrated:

- Students will be able to multiply and divide fractions and mixed numbers.

PA Standards/Anchors:	Eligible Content:
M6.A.1 M6.A.3	M6.A.3.2.1 M6.A.1.2.1

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion • Questioning Techniques • Calculators	• Chapter tests • Worksheets • Quizzes

Grade Level: 6 | **Course Title: Math** | **Topic/Concept: Multiply and Divide Decimals**

Time Allotment: 2 weeks | **Unit Sequence:7**

Major Concepts to be learned:

- Multiply and Divide with Powers of Ten
- Multiply and Divide Decimals

Expected Skills to be demonstrated:

- Students will be able to multiply and divide decimals.
- Students will be able to multiply and divide with powers of ten.
- Students will be able to identify terminating and repeating decimals.

PA Standards/Anchors:	Eligible Content:
M6.A.1 M6.A.3	M6.A.1.1.2 M6.A.1.2.1

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion • Questioning Techniques • Calculators	• Chapter tests • Worksheets • Quizzes

Grade Level: 6 **Course Title: Math** **Topic/Concept: Customary & Metric Units of Measure**

Time Allotment: 2 weeks/end year **Unit Sequence: 8**

Major Concepts to be learned:

- Change between customary units of length, capacity, and weight
- Use powers of ten to change from one metric unit to another
- Perimeter and Area
- Compute with measures that involve different units
- Convert between customary and metric units of measure

Expected Skills to be demonstrated:

- Students will be able to change between customary units of length, capacity, and weight.
- Students will be able to use powers of ten to change from one metric unit to another.
- Students will be able to compute with measures that involve different units.
- Students will be able to convert between customary and metric units of measure.
- Students will be able to explore perimeter and area.

PA Standards/Anchors:	Eligible Content:
M6.B.2	M6.B.2.1.1,2

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion • Questioning Techniques • Calculators	• Chapter tests • Worksheets • Quizzes

Grade Level: 6 | **Course Title: Math** | **Topic/Concept: Collect and Analyze Data**

Time Allotment: 2 weeks | **Unit Sequence: 9**

Major Concepts to be learned:

- Surveys and Sampling
- Measures of Central Tendency
- Clusters, Gaps, and outliers
- Draw conclusions/make predictions

Expected Skills to be demonstrated:

- Students will be able to use data to make predictions.
- Students will be able to describe data using mean, median, mode, and range.
- Students will be able to use a line plot to show data distribution.
- Students will be able to draw conclusions/make predictions based on data.

PA Standards/Anchors:	Eligible Content:
M6.E.1 M6.E.2	M6.E.1.1.1 M6.E.2.1.1

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion • Questioning Techniques • Calculators	• Chapter tests • Worksheets • Quizzes

Grade Level: 6 | **Course Title: Math** | **Topic/Concept: Graph Data**

Time Allotment: 2 weeks | **Unit Sequence: 10**

Major Concepts to be learned:

- Frequency Tables/Histograms
- Stem and Leaf Plots
- Box and Whisker Plot
- Misleading Data

Expected Skills to be demonstrated:

- Students will be able to interpret and display data in graphs.
- Students will be able to make and interpret frequency tables and histograms.
- Students will be able to make and interpret stem and leaf plots.
- Students will be able to make and interpret box and whisker plots.
- Students will be able to interpret data displays/draw conclusions.
- Students will be able to choose appropriate data display.

PA Standards/Anchors:	Eligible Content:
M6.E.1 M6.E.2	M6.E.1.1.1 M6.E.2.1.1

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion • Questioning Techniques • Calculators	• Chapter tests • Worksheets • Quizzes

Grade Level: 6 **Course Title: Math** **Topic/Concept: Algebra: Expressions & Equations**

Time Allotment: 1 week **Unit Sequence: 11**

Major Concepts to be learned:

- Expressions/Equations
- Adding and Subtracting equations
- Multiplications and Division with equations

Expected Skills to be demonstrated:

- Students will be able to solve addition and subtraction equations.
- Students will be able to solve multiplication and division equations.
- Students will be able to use an equation to solve a problem.
- Students will be able to write an equation/expression.

PA Standards/Anchors:	Eligible Content:
M6.D.2	M6.D.2.1.1,2

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion • Questioning Techniques • Calculators	• Chapter tests • Worksheets • Quizzes

Grade Level: 6 **Course Title: Math** **Topic/Concept: Algebra: Patterns, Functions, & Coordinate Plane**

Time Allotment: 1 week **Unit Sequence: 12**

Major Concepts to be learned:

- Graph points in the coordinate plane
- Sequences and patterns
- Graph Functions

Expected Skills to be demonstrated:

- Students will be able to investigate functions and different ways to represent functions.
- Students will be able to find, describe, and extend patterns in number sequences.
- Students will be able to represent functions with graphs to solve problems.

PA Standards/Anchors:	Eligible Content:
M6.D.1	M6.D.1.2.1

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion • Questioning Techniques • Calculators	• Chapter tests • Worksheets • Quizzes

Grade Level: 6 **Course Title: Math** **Topic/Concept: Congruence & Construction**

Time Allotment: 2 weeks **Unit Sequence: 13**

Major Concepts to be learned:

- Congruent and Similar Figures
- Polygons
- Symmetry
- Transformations/Transformations in the Coordinate Plane

Expected Skills to be demonstrated:

- Students will be able to identify, classify, and draw polygons.
- Students will be able to identify congruent and similar figures.
- Students will be able to identify line and rotational symmetry in figures.
- Students will be able to explore transformations, translations, reflections, and rotations.

PA Standards/Anchors:	Eligible Content:
M6.C.1	M6.C.1.1,2,3,4

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion • Questioning Techniques • Calculators/Compass	• Chapter tests • Worksheets • Quizzes

Grade Level: 6 | **Course Title: Math** | **Topic/Concept: Ratio and Proportion**

Time Allotment: 1 week | **Unit Sequence: 14**

Major Concepts to be learned:

- Ratios and Equivalent Ratios
- Distance, Speed, and Time
- Write and solve proportions

Expected Skills to be demonstrated:

- Students will be able to write and solve proportions.
- Students will be able to use ratios to compare numbers and equivalent ratios to find a missing number.
- Students will be able to use a rate to compare quantities with different units.
- Students will be able to use the distance formula to find distance, speed, and time.
- Students will be able to use proportions to find relationships and solve problems.
- Students will be able to solve a problem by writing an equation.

PA Standards/Anchors:	Eligible Content:
M6.D.1	M6.D.1.2.1

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion • Questioning Techniques • Calculators	• Chapter tests • Worksheets • Quizzes

Grade Level: 6 | **Course Title: Math** | **Topic/Concept: Understand Percent**

Time Allotment: 1 week | **Unit Sequence: 15**

Major Concepts to be learned:

- Compare and Order Fractions, decimals, and percents
- Relate fractions, decimals, and percents
- Relate ratios and percents

Expected Skills to be demonstrated:

- Students will be able to write equivalent ratios, decimals, and percents.
- Students will be able to relate ratios and percents.
- Students will be able to compare and order fractions, decimals, and percents.

PA Standards/Anchors:	Eligible Content:
M6.A.1	M6.A.1.2.1,2,3,4

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion • Questioning Techniques • Calculators	• Chapter tests • Worksheets • Quizzes

Grade Level: 6 **Course Title: Math** **Topic/Concept: Use Percent**

Time Allotment: 2 weeks **Unit Sequence:16**

Major Concepts to be learned:

- Find a percent
- Find a number when a percent is known
- Use an equation to solve percent problems
- Calculate simple interest

Expected Skills to be demonstrated:

- Students will be able to find a percent.
- Students will be able find a number when a percent is known.
- Students will be able use an equation to solve percent problems.
- Students will be able calculate simple interest.
- Students will be able make a table to solve a problem.
- Students will be able use percents to calculate total cost with sales tax and sale prices.

PA Standards/Anchors:	Eligible Content:
M6.A.1	M6.A.1.2.1,2

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion/Questioning Techniques • Calculators	• Chapter tests • Worksheets • Quizzes

Grade Level: 6 | **Course Title: Math** | **Topic/Concept: Area**

Time Allotment: 2 weeks | **Unit Sequence: 17**

Major Concepts to be learned:

- Area of a Parallelogram
- Area of a triangle

Expected Skills to be demonstrated:

- Students will be able to find the area of a parallelogram/triangle.

PA Standards/Anchors:	Eligible Content:
M6.B.2	M6.B.2.2 M6.B.2.2.1,2

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion/Questioning Techniques • Calculators	• Chapter tests • Worksheets • Quizzes

Grade Level: 6 | **Course Title: Math** | **Topic/Concept: Volume and Surface Area**

Time Allotment: 2 weeks | **Unit Sequence: 18**

Major Concepts to be learned:

- Solid Figures
- Two-Dimensional Views/NETS of Solid Figures
- Volume of Rectangular Prisms
- Surface Area
- Volume of Other Solids

Expected Skills to be demonstrated:

- Students will be able draw and identify different views of a solid figure.
- Students will be able find the volume of a rectangular prism, triangular prism, a cylinder, a pyramid, and a cone.
- Students will be able find the surface area of a rectangular prism, triangular prism, and a square pyramid.

PA Standards/Anchors:	Eligible Content:
M6.B.2	M6.B.2.2 M6.B.2.2.1 M6.B.2.3 M6.B.2.3.1

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion/Questioning Techniques • Calculators	• Chapter tests • Worksheets • Quizzes

Grade Level: 6 **Course Title: Math** **Topic/Concept: Rational Numbers**

Time Allotment: 1 week **Unit Sequence: 19**

Major Concepts to be learned:

- Rational numbers
- Compare and order rational numbers
- Order of operations with rational numbers

Expected Skills to be demonstrated:

- Students will be able use the properties of rational numbers.
- Students will be able solve problems using rational numbers.
- Students will be able use order of operations to evaluate expressions with rational numbers.
- Students will be able identify and graph rational numbers on a number line.
- Students will be able compare and order rational numbers.

PA Standards/Anchors:	Eligible Content:
M6.D.2	M6.D.2.1

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion • Questioning Techniques • Calculators	• Chapter tests • Worksheets • Quizzes

Grade Level: 6 **Course Title: Math** **Topic/Concept: Expressions, Equations, & Inequalities**

Time Allotment: 1 week **Unit Sequence: 20**

Major Concepts to be learned:

- Equations with rational numbers
- Inequalities
- Expressions

Expected Skills to be demonstrated:

- Students will be able use properties and order of operations to evaluate algebraic expressions.
- Students will be able write algebraic expressions with rational numbers.
- Students will be able solve equations with rational numbers.
- Students will be able use guess and check strategy to solve problems.
- Students will be able use inequality symbols to solve inequalities.

PA Standards/Anchors:	Eligible Content:
M6.A.1 M6.D.2	M6.A.1.2 M6.D.2.2

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion • Questioning Techniques • Calculators	• Chapter tests • Worksheets • Quizzes

Grade Level: 6 **Course Title: Math** **Topic/Concept: Integers**

Time Allotment: 2 weeks **Unit Sequence: 21**

Major Concepts to be learned:

- Add and Subtract Integers
- Multiply and Divide Integers

Expected Skills to be demonstrated:

- Students will be able find the sum and difference of two integers.
- Students will be able find the product and quotient of two integers.

PA Standards/Anchors:	Eligible Content:
M6.D.1 M6.D.2	M6.D.1.2 M6.D.2.2

Instructional Strategies:	Assessments:
• Co-Teaching • Cooperative learning • Direct instruction/Note taking • Modeling • Group Discussion • Questioning Techniques • Calculators	• Chapter tests • Worksheets • Quizzes