Grade level: 5 **Course Title: Math** **Topic/Concept: Place Value & Whole Numbers**

Time Allotment: 7 days **Unit Sequence: 1**

Major Concepts to be learned:

- Place Value & Patterns
- Place Value of Whole Numbers
- Properties
- Powers of 10 & Exponents
- Multiplication Patterns

Expected Skills to be demonstrated:

- Reorganize the 10-1 relationship amount place value positions.
- Read & write whole numbers through hundred million.
- Use properties to solve problems.
- Write & evaluate re[eated factors in exponent form.
- Use a base fact and pattern to multiply mentally by multiples of 10, 100, & 1,000.

PA Standards/Anchors:

M5.D.1.1
M5.D.1.2
M5.A.1.2
M5.A.3.1
M5.A.1.3
M5.A.2.1

Eligible Content:

M5.D.1.1.1
M5.D.1.1.2
M5.D.1.2.1
M5.A.1.2.1
M5.A.3.1.1
M5.A.2.1.3
M5.A.1.1.1
M5.A.1.2.2
M5.A.1.3.1
M5.A.2.1.1
M5.A.3.1.2

Instructional Strategies:

- Math notebook
- Note taking
- Lecture
- Cooperative learning groups
- Calculators
- Hands on activities
- Small group instruction
- Problem solving strategies

Assessments:

- Informal math notebook
- Quizzes
- Tests
- Open-ended problem solving
- Daily math

Grade level: 5

Course Title: Math

Topic/Concept: Multiplication & Division of Whole Numbers

Time Allotment: 6 weeks

Unit Sequence: 2

Major Concepts to be learned:

- Multiply by multi-digit numbers
- Division with 2-digit divisors
- Partial quotients

Estimate with 2-digit divisors

Expected Skills to be demonstrated:

- Multiple of multi-digit numbers
- Model division with 2-digit divisors.
- Partial quotients to divide by 2-digit divisors
- Estimate quotients using compatible numbers.

PA Standards/Anchors:

M5.A.2.1
M5.A.3.1
M5.A.1.3
M5.A.3.2

Eligible Content:

M5.A.2.1.1
M5.A.3.1.1
M5.A.3.1.1
M5.A.3.2.1
M5.A.2.1.3
M5.A.3.1.2

Instructional Strategies:

- Math notebook
- Note taking
- Lecture
- Cooperative learning groups
- Calculators
- Hands on activities
- Small group instruction
- Problem solving strategies

Assessments:

- Informal math notebook
- Quizzes
- Tests
- Open-ended problem solving
- Daily math

Grade level: 5

Course Title: Math

Topic/Concept: Multiplication & Division of Whole Numbers

Time Allotment: 8 days

Unit Sequence: 3

Major Concepts to be learned:

- Divide by 2-digit divisors
- Interpret remainders
- Adjust quotients

Draw a picture to solve
Model multiplcation & division problems
Solve multi-step problems with bar model

Expected Skills to be demonstrated:

- Divide 2-digit divisors.
- Interpret remainders as fractions.
- Adjust quotients if remainder is too high.
- Solve division problems by drawing a diagram.

Model & solve real-world multiplication & division equations.
Solve real-world multi-step problems using equations.

PA Standards/Anchors:

M5.A.2.1
M5.A.3.1
M5.A.1.3
M5.A.3.2

Eligible Content:

M5.A.2.1.1
M5.A.3.2.1
M5.A.3.1.1
M5.A.2.1.3

Instructional Strategies:

- Math notebook
- Note taking
- Lecture
- Cooperative learning groups
- Calculators
- Hands on activities
- Small group instruction
- Problem solving strategies

Assessments:

- Informal math notebook
- Quizzes
- Tests
- Open-ended problem solving
- Daily math

Grade level: 5 | **Course Title: Math** | **Topic/Concept: Place Value & Decimals**

Time Allotment: 7 days | **Unit Sequence: 4**

Major Concepts to be learned:

- Thousandths place
- Read & write decimals through thousandths
- Compose & decompose decimals
- Compare & order decimals
- Round decimals

Expected Skills to be demonstrated:

- Read & write decimals to thousandths.
- Compose & decompose decimals that included tenths, hundredths, & thousandths.
- Compare & order decimals to thousandths place.
- Compare & order decimals to thousandths place.
- Round decimals to any place value.

PA Standards/Anchors:

M5.D.1.1	M5.A.2.1
M5.D.1.2	M5.A.1.3
M5.A.1.2	
M5.A.3.1	

Eligible Content:

M5.D.1.1.1	M5.A.3.1.1	M5.A.1.3.1
M5.D.1.1.2	M5.A.2.1.3	M5.A.2.1.1
M5.D.1.2.1	M5.A.1.1.1	M5.A.3.1.2
M5.A.1.2.1	M5.A.1.2.2	

Instructional Strategies:

- Math notebook
- Note taking
- Lecture
- Cooperative learning groups
- Calculators
- Hands on activities
- Small group instruction
- Problem solving strategies

Assessments:

- Informal math notebook
- Quizzes
- Tests
- Open-ended problem solving
- Daily math

Grade level: 5 **Course Title: Math** **Topic/Concept: Add & Subtract Decimals**

Time Allotment: 7 days **Unit Sequence: 5**

Major Concepts to be learned:

- Decimal addition
- Decimal subtraction
- Solve decimal sequences

Add & subtract decimals through thousandths
Add & subtract money

Expected Skills to be demonstrated:

- Model decimal addition
- Model decimal subtraction
- Solve real-world decimals problems using addition & subtraction.
- Identify, describe, & create numeric pattersn with decimals.
- Add & subtract multi-digit numbers with decimals to thousandths.

Solve problems by making tables.

PA Standards/Anchors:

M5.D.1.1
M5.D.1.2
M5.A.1.2
M5.A.3.1
M5.A.1.3
M5.A.2.1

Eligible Content:

M5.D.1.1.1
M5.D.1.1.2
M5.D.1.2.1
M5.A.1.2.1
M5.A.3.1.1
M5.A.2.1.3
M5.A.1.1.1
M5.A.1.2.2
M5.A.1.3.1
M5.A.2.1.1
M5.A.3.1.2

Instructional Strategies:

- Math notebook
- Note taking
- Lecture
- Cooperative learning groups
- Calculators
- Hands on activities
- Small group instruction
- Problem solving strategies

Assessments:

- Informal math notebook
- Quizzes
- Tests
- Open-ended problem solving
- Daily math

Grade level: 5

Course Title: Math

Topic/Concept: Multiplying Decimals & Whole Numbers

Time Allotment: 7 days

Unit Sequence: 6

Major Concepts to be learned:

- Understanding decimal multiplcation patterns
- Representing multiplcation with decimals & whole numbers
- Multiplication with decimals & whole numbers

Multiply using expanded form
Multiply money

Expected Skills to be demonstrated:

- Find patterns in products.
- Model multiplication of whole numbers and decimals.
- Multiply a decimal & whole numbers using properties & place value.
- Use expanded form & place value to multiply a decimal & whole number.
- Solve problems using “draw a diagram” to multiply money.

PA Standards/Anchors:

M5.A.2.1
M5.A.3.1
M5.A.1.3

Eligible Content:

M5.A.2.1.1.
M5.A.3.1.2
M5.A.3.1.1
M5.A.2.1.3

Instructional Strategies:

- Math notebook
- Note taking
- Lecture
- Cooperative learning groups
- Calculators
- Hands on activities
- Small group instruction
- Problem solving strategies

Assessments:

- Informal math notebook
- Quizzes
- Tests
- Open-ended problem solving
- Daily math

Grade level: 5 **Course Title: Math** **Topic/Concept: Multiplying Decimals**

Time Allotment: 6 days **Unit Sequence: 7**

Major Concepts to be learned:

- Represent decimal multiplication
- Multiply decimals
- Multiply decimals with zeros in the product

Apply properties of multiplication to decimals

Expected Skills to be demonstrated:

- Model multiplication of decimals.
- Decimal placement.
- Multiply decimals with zero in the product.
- Use properties of operations to solve problems.

PA Standards/Anchors:

M5.A.2.1
M5.A.3.1
M5.A.1.3

Eligible Content:

M5.A.2.1.1
M5.A.3.1.1
M5.A.2.1.3
M5.A.3.1.2

Instructional Strategies:

- Math notebook
- Note taking
- Lecture
- Cooperative learning groups
- Calculators
- Hands on activities
- Small group instruction
- Problem solving strategies

Assessments:

- Informal math notebook
- Quizzes
- Tests
- Open-ended problem solving
- Daily math

Grade level: 5 **Course Title: Math** **Topic/Concept: Divide Decimals**

Time Allotment: 7 days **Unit Sequence: 8**

Major Concepts to be learned:

- Understand decimal division patterns
- Division of decimals by whole numbers
- Estimate quotients

Represent decimal division
Write zeros in division
Solve multi-step decimal problems

Expected Skills to be demonstrated:

- Use patterns to help place decimal point in quotient.
- Model division of decimals by whole numbers.
- Estimate decimal quotients.
- Divide decimals by whole numbers.
- Model division by decimals.

Write a zero in the dividend to find a quotient.
Solve multi-step decimal problems using the strategy working backwards.

PA Standards/Anchors:

M5.A.3.2
M5.A.2.1
M5.A.3.1

Eligible Content:

M5.A.3.2.1
M5.A.2.1.3
M5.A.3.1.1

Instructional Strategies:

- Math notebook
- Note taking
- Lecture
- Cooperative learning groups
- Calculators
- Hands on activities
- Small group instruction
- Problem solving strategies

Assessments:

- Informal math notebook
- Quizzes
- Tests
- Open-ended problem solving
- Daily math

Grade level: 5

Course Title: Math

Topic/Concept: Add & subtract fractions with unlike denominators

Time Allotment: 7 days

Unit Sequence: 9

Major Concepts to be learned:

- Represent addition with unlike denominators
- Represent subtraction with unlike denominators
- Estimate fraction sums & differences

Rewrite fractions with common denominators
Add & subtract fractions with unlike denominators

Expected Skills to be demonstrated:

- Use models to add fractions with unlike denominators.
- Use models to subtract fractions with unlike denominators.
- Make reasonable estimages of fraction sums & differences.
- Find a common denominator to write equivalent fractions.

PA Standards/Anchors:

M5.A.1.3
M5.A.2.1
M5.A.3.1

Eligible Content:

M5.A.1.3.3
M5.A.2.1.2
M5.A.3.1.1
M5.A.2.1.3
M5.A.3.2.1

Instructional Strategies:

- Math notebook
- Note taking
- Lecture
- Cooperative learning groups
- Calculators
- Hands on activities
- Small group instruction
- Problem solving strategies

Assessments:

- Informal math notebook
- Quizzes
- Tests
- Open-ended problem solving
- Daily math

Grade level: 5

Course Title: Math

Topic/Concept: Add & subtract factions and mixed numbers with unlike denominators

Time Allotment: 7 days

Unit Sequence: 10

Major Concepts to be learned:

- Add & subtract mixed numbers with unlike denominators
- Rename mixed numbers to subtract
- Solve fraction sequences

Apply properties of addition
Practice addition & subtraction using equations

Expected Skills to be demonstrated:

- Add & subtract mixed numbers with unlike denominators.
- Rename to find the difference of 2 mixed numbers.
- Use addition & subtraction to describe a pattern or create a sequence with fractions.
- Add fractions & mixed numbers using unlike denominators.
- Solve problems using the strategy working backwards.

PA Standards/Anchors:

M5.A.1.3
M5.A.2.1
M5.A.3.1

Eligible Content:

M5.A.1.3.3
M5.A.2.1.2
M5.A.3.1.1
M5.A.2.1.3
M5.A.3.2.2

Instructional Strategies:

- Math notebook
- Note taking
- Lecture
- Cooperative learning groups
- Calculators
- Hands on activities
- Small group instruction
- Problem solving strategies

Assessments:

- Informal math notebook
- Quizzes
- Tests
- Open-ended problem solving
- Daily math

Grade level: 5 **Course Title: Math** **Topic/Concept: Multiply fractions**

Time Allotment: 10 days **Unit Sequence: 11**

Major Concepts to be learned:

- Find part of a group
- Multiply fractions and whole numbers
- Fraction & whole number multiplication
- Multiply fractions

Compare relative size of products to fraction factors.
Compare relative size of products with faction multiplication
Compare relative size of products to mixed number factors
Find unknown functional lengths

Expected Skills to be demonstrated:

- Model to find the fractional part of a group.
- Model the product of a fraction & a whole number.
- Solve problems using strategy, guess & check, and revise.
- Relate the size of the product compared to the size of 1 factor when multiplying fractions.
- Relate the size of the product to the factors when multiplying fractions greater than one.

Multiply fractions.
Multiply fractions & whole numbers.
Multply fractions using models.

PA Standards/Anchors:

M5.A.1.5

Eligible Content:

M5.A.1.5.1

Instructional Strategies:

- Math notebook
- Note taking
- Lecture
- Cooperative learning groups
- Calculators
- Hands on activities
- Small group instruction
- Problem solving strategies

Assessments:

- Informal math notebook
- Quizzes
- Tests
- Open-ended problem solving
- Daily math

Grade level: 5 | **Course Title: Math** | **Topic/Concept: Divide fractions.**

Time Allotment: 7 days | **Unit Sequence: 12**

Major Concepts to be learned:

- Divide whole numbers & unit fractions
- Relate division & multiplication of fractions
- Interpret a fraction as division

Fraction & whole number division
Visual models & equations to represent division with fractions

Expected Skills to be demonstrated:

- Divide a whole number by a fraction & a fraction by a whole number.
- Interpret fractions as division and solve whole number division problems that result in a fraction or mixed number.
- Divide a whole number by a fraction and divide a fraction by a whole number.
- Represent division by drawing diagrams and writing story problems & equations.

PA Standards/Anchors:	Eligible Content:
M5.A.1.5	M5.A.1.5.1

Instructional Strategies:	Assessments:
• Math notebook • Note taking • Lecture • Cooperative learning groups • Calculators • Hands on activities • Small group instruction • Problem solving strategies	• Informal math notebook • Quizzes • Tests • Open-ended problem solving • Daily math

Grade level: 5 **Course Title: Math** **Topic/Concept: Expressions**

Time Allotment: 7 days **Unit Sequence: 13**

Major Concepts to be learned:

- Write number expressions
- Evaluate number expressions
- Evaluate expressions with grouping symbols

Expected Skills to be demonstrated:

- Write numerical expressions.
- Use the order of operations to evaluate numerical expressions.
- Evaluate numerical expressions with parentheses, brackets, & braces.

PA Standards/Anchors:	Eligible Content:
M5.A.1.2 M5.A.4.2	M5.A.1.2.2 M5.A.4.2.2

Instructional Strategies:	Assessments:
• Math notebook • Note taking • Lecture • Cooperative learning groups • Calculators • Hands on activities • Small group instruction • Problem solving strategies	• Informal math notebook • Quizzes • Tests • Open-ended problem solving • Daily math

Grade level: 5 | **Course Title: Math** | **Topic/Concept: Perimeter & Area of Rectangles with fractional & decimal side lengths**

Time Allotment: 5 days | **Unit Sequence: 14**

Major Concepts to be learned:

- Find perimeter & area of rectangles with decimal side lengths.
- Find perimeter & area of rectangles with fractional side lengths.
- Explore area & mixed numbers.

Expected Skills to be demonstrated:

- Use formulas to find the area & perimeter of shapes with decimal lengths.
- Use formulas to find the area & perimeter of shapes with fractional sides.
- Use a model to multiply 2 mixed numbers & find the area of a rectangle.

PA Standards/Anchors:

M5.B.2.2
M5.B.1.3
M5.B.1.1
M5.C.1.1

Eligible Content:

M5.B.2.2.1
M5.B.2.2.2
M5.B.2.2.3
M5.B.1.3.1
M5.C.1.1.1

Instructional Strategies:

- Math notebook
- Note taking
- Lecture
- Cooperative learning groups
- Calculators
- Hands on activities
- Small group instruction
- Problem solving strategies

Assessments:

- Informal math notebook
- Quizzes
- Tests
- Open-ended problem solving
- Daily math

Grade level: 5

Course Title: Math

Topic/Concept: Classify 2-dimensional & 3-dimensional figures

Time Allotment: 6 days

Unit Sequence: 15

Major Concepts to be learned:

- Identify & classify 2-dimensional figures
- Classify triangles
- Classify quadrilaterals

Identify & classify 3-dimensional figures

Expected Skills to be demonstrated:

- Identify & classify polygons.
- Classify & draw triangles using their properties.
- Classify & compare quadrilaterals usign their properties.
- Identify, describe, & classify 3-dimensional figures.

PA Standards/Anchors:

M5.C.1.2
M5.C.2.1
M5.C.1.1
M5.B.1.3

Eligible Content:

M5.C.1.2.1
M5.C.2.1.1
M5.C.2.1.2
M5.C.1.1.2
M5.B.1.3.2

Instructional Strategies:

- Math notebook
- Note taking
- Lecture
- Cooperative learning groups
- Calculators
- Hands on activities
- Small group instruction
- Problem solving strategies

Assessments:

- Informal math notebook
- Quizzes
- Tests
- Open-ended problem solving
- Daily math

Grade level: 5 **Course Title: Math** **Topic/Concept: Volume**

Time Allotment: 8 days **Unit Sequence: 16**

Major Concepts to be learned:

- Unit cubes & 3-dimensional figures
- Understand volume
- Estimate volume
- Volume of rectangular prisms
- Apply volume of formulas
- Find volume of composed figures

Expected Skills to be demonstrated:

- Understand unit cubes & how they can be used to build a 3-D figure.
- Count unit cubes that fill solid figures to find volume.
- Estimate the volume of a rectangular prism.
- Find the volume of a rectagular prism.
- Use a formula to find volume of a rectangular prism.
- Find the volume of a combined rectangular prism.

PA Standards/Anchors:

M5.B.2.2
M5.B.1.3
M5.B.1.1
M5.C.1.1

Eligible Content:

M5.B.2.2.1
M5.B.2.2.2
M5.B.1.3.1
M5.C.1.1.1
M5.B.2.2.3

Instructional Strategies:

- Math notebook
- Note taking
- Lecture
- Cooperative learning groups
- Calculators
- Hands on activities
- Small group instruction
- Problem solving strategies

Assessments:

- Informal math notebook
- Quizzes
- Tests
- Open-ended problem solving
- Daily math

Grade level: 5 **Course Title: Math** **Topic/Concept: Covert Units of Measure**

Time Allotment: 5 days **Unit Sequence: 17**

Major Concepts to be learned:

- Solve multi-step customary measurement problems
- Solve multi-step metric measurement problems

Expected Skills to be demonstrated:

- Convert measurement units to solve multi-step problems.
- Compare, contrast, & convert metric units.
- Solve problems about customary & metric conversions using the strategy of “making a table”.

PA Standards/Anchors:

M5.B.1.1
M5.B.1.2
M5.B.2.1
M5.B.2.2

Eligible Content:

M5.B.1.1.1
M5.B.1.2.1
M5.B.1.2.2
M5.B.2.1.1
M5.B.2.2.3

Instructional Strategies:

- Math notebook
- Note taking
- Lecture
- Cooperative learning groups
- Calculators
- Hands on activities
- Small group instruction
- Problem solving strategies

Assessments:

- Informal math notebook
- Quizzes
- Tests
- Open-ended problem solving
- Daily math

Grade level: 5 | **Course Title: Math** | **Topic/Concept: Graphs & Patterns**

Time Allotment: 9 days | **Unit Sequence: 18**

Major Concepts to be learned:

- Record inputs & outputs in a 2-column table
- Write a rule for number patterns in tables
- Write a rule for number patterns in graphs
- Graph number patterns
- Understand ordered pairs
- Graph & analyze relationships
- Graph data

Expected Skills to be demonstrated:

- Generate a number pattern.
- Write a rule to describe a pattern.
- Write a rule for a pattern given in a graph.
- Graph the relationship between 2 numerical patterns on a coordinate plane.
- Graph & name points on a coordinate plane using ordered pairs.
- Collect & graph data on a coordinate plane.
- Graph a number pattern.

PA Standards/Anchors:

M5.E.1.1
M5.A.1.4

Eligible Content:

M5.E.1.1.1
M5.A.1.4.1
M5.A.1.4.2

Instructional Strategies:

- Math notebook
- Note taking
- Lecture
- Cooperative learning groups
- Calculators
- Hands on activities
- Small group instruction
- Problem solving strategies

Assessments:

- Informal math notebook
- Quizzes
- Tests
- Open-ended problem solving
- Daily math