DELAWARE VALLEY SCHOOL DISTRICT

PLANNED INSTRUCTION

A PLANNED COURSE FOR:

Mathematics

Grade Level: 4

Date of Board Approval: **2017**

Planned Instruction

Title of Planned Instruction: Grade 4 Mathematics

Subject Area: Mathematics   Grade(s): 4

Course Description: In grade 4, instructional time should focus on four critical areas: (1) developing understanding and fluency with multi-digit multiplication including familiarity with patterns, factors and multiples, and developing understanding of dividing to find quotients involving multi-digit dividends; (2) developing an understanding of fraction/decimal equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers; (3) understanding that geometric figures can be analyzed and classified on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry; and (4) solving problems involving length, weight, liquid, mass, volume, time, area, and perimeter.

Time/Credit for the Course: Full Course

Curriculum Writing Committee: Brian Felkowski, Tiffany Genovese, Kathleen Tschop

Curriculum Map

1. **Marking Period One**
   Classroom Diagnostic Tools (3 days)
   Place Value, Addition, and Subtraction to One Million (11 days)
   Multiply by 1-Digit Numbers (15 days)
   Multiply 2-Digit numbers (2 days)
   Divide by 1-Digit Numbers (12 days)
   Classroom Diagnostic Tool (2 days)

2. **Marking Period Two**
   Divide by 1-Digit Numbers (4 days) * continuation of marking period 1
   Factors, Multiples, and Patterns (10 days)
   Fraction Equivalence and Comparison (12 days)
   Add and Subtract Fractions (14 days)
   Multiply Fractions by Whole Numbers (5 days)

3. **Marking Period Three**
   Classroom Diagnostic Tools (3 days)
   Multiply Fractions by Whole Numbers (4 days) * continuation of marking period 2
   Relate Fractions and Decimals (10 days)
   Two-Dimensional Figures (7 days)
   Angles (5 days)
   Relative Sizes of Measurement Units (14 days)
   Classroom Diagnostic Tool (2 days)

4. **Marking Period Four**
   Algebra: Perimeter and Area (5 days)
   Multiply 2- Digit Numbers (9 days)
   * Getting Ready for 5th Grade Skills (28 days):
     - Add Related Fractions
     - Subtract Related Fractions
     - Algebra: Order of Operations
     - Area and Tiling
     - Multiply Three Factors
     - Find Area of the Base
     - Locate Points on a Grid
   PSSA (3 days)

Curriculum Plan

Mathematical Standard Areas:
2.1 Numbers and Operations, B) Base Ten
Place Value, Addition, and Subtraction to One Million

Standards Addressed: CC.2.1.4. B.1, CC.2.1.4. B.2

Link to Standards in SAS

http://static.pdesas.org/content/documents/PA%20Core%20Standards%20Mathematics%20PreK-12%20March%202014.pdf

Goals:

Students will:

- Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right
- Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
- Use place value understanding to round multi-digit whole numbers to any place.
- Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.
- Fluently add and subtract multi-digit whole numbers using the standard algorithm.

Objectives:

Students will be able to:

- Demonstrate an understanding that in a multi-digit whole number (through 1,000,000), a digit in one place represents ten times what it represents in the place to its right (DOK – Level Two)
- Read and write whole numbers in expanded, standard, and word form through 1,000,000 (DOK – Level One)
- Compare two-digit multi-digit numbers through 1,000,000 based on meanings of the digits in each place (DOK – Level Two)
- Round multi-digit whole numbers (through 1,000,000) to any place. (DOK – Level One)
- Add and subtract multi-digit whole numbers (limit sums and subtrahends up to and including 1,000,000) (DOK – Level One)
- Estimate to find the answer for addition and subtraction using whole numbers through six digits (DOK – Level Two)

- Demonstrate an understanding that in a multi-digit whole number (through 1,000,000), a digit in one place represents ten times what it represents in the place to its right (DOK – Level Two)
- Solve multi-step word problems posed with whole numbers using addition and subtraction operations Answers will be either whole numbers or have remainders that must be interpreted yielding a final answer that is a whole number Represent these problems using equations with a symbol or letter standing for the unknown quantity (DOK – Level Three)

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Mathematical Standard Areas: (Those that apply)
2.1 Numbers and Operations, B) Base Ten
Multiply by 1 Digit Numbers

Standards Addressed: CC.2.1.4. B.2, CC.2.2.4. A.1
Link to Standards in SAS
http://static.pdesas.org/content/documents/PA%20Core%20Standards%20Mathematics%20PreK-12%20March%202014.pdf

Goals:

Students will:

- Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.
- Multiply or divide to solve word problems involving multiplicative comparisons, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative from additive comparison.
- Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
- Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Objectives:

Students will be able to:

- Demonstrate an understanding that in a multi-digit whole number (through 1,000,000), a digit in one place represents ten times what it represents in the place to its right (DOK - Level Two)
- Multiply a whole number of up to four digits by a one-digit whole number and multiply 2 two-digit numbers (DOK - Level One)
- Estimate the answer to multiplication problems using whole numbers through six digits (for multiplication, no more than 2 digits' x 1 digit, excluding powers of 10) (DOK - Level Two)
- Interpret a multiplication equation as a comparison Represent verbal statements of multiplicative comparisons as multiplication equations (DOK - Level Three)

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- Multiply or divide to solve word problems involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison (DOK - Level Three)
- Solve multi-step word problems posed with whole numbers using the four operations. Answers will be either whole numbers or have remainders that must be interpreted yielding a final answer that is a whole number Represent these problems using equations with a symbol or letter standing for the unknown quantity (DOK - Level Three)

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Mathematical Standard Areas:
2.1 Numbers and Operations, B) Base ten
Multiply 2 Digit Numbers

Standards Addressed: CC.2.1.4. B.2, CC.2.2.4. A.1
Link to Standards in SAS
http://static.pdesas.org/content/documents/PA%20Core%20Standards%20Mathematics%20PreK-12%20March%202014.pdf

Goals:
Students will:

- Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models
- Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Objectives:

- Multiply a whole number of up to four digits by a one-digit whole number and multiply 2 two-digit numbers (DOK - Level One)
- Estimate the answer to multiplication problems using whole numbers through six digits (for multiplication, no more than 2 digits' x 1 digit, excluding powers of 10) (DOK - Level Two)
- Interpret a multiplication equation as a comparison Represent verbal statements of multiplicative comparisons as multiplication equations (DOK - Level Three)
- Multiply or divide to solve word problems involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison (DOK - Level Three)
- Solve multi-step word problems posed with whole numbers using the four operations Answers will be either whole numbers or have remainders that must be interpreted yielding a final answer that is a whole number Represent these problems using equations with a symbol or letter standing for the unknown quantity (DOK - Level Three)
- Multiply a whole number of up to four digits by a one-digit whole number and multiply 2 two-digit numbers (DOK – Level One)
- Estimate the answer to addition, subtraction, and multiplication problems using whole numbers through six digits (for multiplication, no more than 2 digits X 1 digit, excluding powers of 10) (DOK – Level Two)
- Multiply a whole number by a non-unit fraction (denominators limited to

2,3,4,5,6,8,10.12, and 100 and final answers do not need to be simplified or written as a mixed number) (DOK – Level One)

- Solve word problems involving multiplication of a whole number by a fraction (denominators limited to 2,3,4,5,6,8,10,12, and 100) (DOK – Level Two)
- Multiply or divide to solve word problems involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison (DOK – Level Three)

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Mathematical Standard Areas:
2.1. Numbers and Operations, Base ten, Divide by 1 Digit Numbers

Standards Addressed: CC.2.1.4. B.2, CC.2.2.4. A.1

Link to Standards in SAS

http://static.pdesas.org/content/documents/PA%20Core%20Standards%20Mathematics%20PreK-12%20March%202014.pdf

Goals:

Students will:

- Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
- Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
- Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.

Objectives:

Students will be able to:

- Divide up to four-digit dividends by one-digit divisors with answers written as whole-number quotients and remainders (DOK - Level One)
- Multiply or divide to solve word problems involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison (DOK - Level Three)
- Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted.
- Assess the reasonableness of answers using mental computation and estimation strategies including rounding

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<u>Mathematical Standard Areas:</u>
2.2 Algebraic Concepts, A) Operations and Algebraic Thinking
Factors, Multiples and Patterns

Standards Addressed: CC.2.2.4. A.1, CC.2.2.4. A.2, CC.2.2.4. A.4
Link to Standards in SAS
http://static.pdesas.org/content/documents/PA%20Core%20Standards%20Mathematics%20PreK-12%20March%202014.pdf

Goals:
Students will:

- Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.
- Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.
- Find the missing symbol that makes a number sentence true
- Determine rules and missing elements to complete function tables

Objectives:

Students will be able to:

- Find all factors of a number by using models (DOK 1)
- Determine whether a number is a factor of a given number (DOK 1)
- Solve problems with common factors by using the strategy make a list (DOK 2)
- Understand the relationship between factors and multiples and determine whether a number is a multiple of a given number (DOK 3)
- Determine whether a number is prime or composite (DOK 1)
- Generate a number pattern and describe features of a pattern (DOK 2)
- Compare relationships of values within a given table (DOK 2)

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Mathematical Standard Areas:
2.1. Numbers and Operations, C) Fractions
Fraction Equivalence and Comparison

Standards Addressed: CC.2.1.4. C.1
Link to Standards in SAS
http://static.pdesas.org/content/documents/PA%20Core%20Standards%20Mathematics%20PreK-12%20March%202014.pdf

Goals:
Students will:

- Explain why a fraction a/b is equivalent to a fraction (n × a)/ (n × b) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.
- Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.

Objectives:

Students will be able to:

- Recognize and generate equivalent fractions (DOK – Level Two)
- Use models to show equivalent fractions (DOK – Level Two)
- Use multiplication to generate equivalent fractions (DOK – Level One)
- Write and Identify equivalent fractions in simplest form (DOK – Level One)
- Use equivalent fractions to represent a pair of fractions as fractions with a common denominator (DOK – Level Two)
- Use the strategy *make a table* to solve problems using equivalent fractions (DOK – Level Three)
- Compare fractions using benchmarks (DOK – Level Two)
- Compare and order fractions (DOK – Level Two)
- Compare two fractions with different numerators and different denominators (denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100) using the symbols >, =, or < and justify the conclusions (DOK – Level Two)

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<u>Mathematical Standard Areas:</u>
2.1. Numbers and Operations, C) Fractions
Add and Subtract Fractions

Standards Addressed: CC.2.1.4. C.2
Link to Standards in SAS
http://static.pdesas.org/content/documents/PA%20Core%20Standards%20Mathematics%20PreK-12%20March%202014.pdf

Goals:
Students will:

- Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
- Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model.
- Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.
- Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.

Objectives:

Students will be able to:

- Add and subtract fractions with a common denominator (denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100; answers do not need to be simplified; and no improper fractions as the final answer) (DOK – Level One)
- Decompose a fraction or a mixed number into a sum of fractions with the same denominator (denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100), recording the decomposition by an equation. Justify decompositions (e.g., by using a visual fraction model) (DOK – Level Three)
- Add and subtract mixed numbers with a common denominator (denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100; no regrouping with subtraction; fractions do not need to be simplified; and no improper fractions as the final answers) (DOK – Level One)
- Solve word problems involving addition and subtraction of fractions referring to the same whole or set and having like denominators (denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100) (DOK – Level Two)
- Recognize and generate equivalent fractions (DOK – Level Two)

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Mathematical Standard Areas:
2.1. Numbers and Operations, C) Fractions
Multiply Fractions by Whole Numbers

Standards Addressed: CC.2.1.4. C.2
Link to Standards in SAS
http://static.pdesas.org/content/documents/PA%20Core%20Standards%20Mathematics%20PreK-12%20March%202014.pdf

Goals:
Students will:

- Understand a fraction a/b as a multiple of 1/b.
- Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number.
- Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem.

Objectives:

Students will be able to:

- Decompose a fraction or a mixed number into a sum of fractions with the same denominator (denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100), recording the decomposition by an equation. Justify decompositions (e.g., by using a visual fraction model) (DOK – Level Three)
- Multiply a whole number by a unit fraction (denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100 and final answers do not need to be simplified or written as a mixed number) (DOK – Level Two)
- Multiply a whole number by a non-unit fraction (denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100 and final answers do not need to be simplified or written as a mixed number) (DOK – Level Two)
- Solve word problems involving multiplication of a whole number by a fraction (denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100) (DOK – Level Two)
- Recognize and generate equivalent fractions (DOK – Level Two)
- Compare two fractions with different numerators and different denominators (denominators limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100) using the symbols >, =, or < and justify the conclusions (DOK – Level Two)

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Mathematical Standard Areas:
2.1. Numbers and Operations, C) Fractions
Relate Fractions and Decimals

Standards Addressed: CC.2.1.4. C.2, CC.2.1.4. C.3
Link to Standards in SAS
http://static.pdesas.org/content/documents/PA%20Core%20Standards%20Mathematics%20PreK-12%20March%202014.pdf

Goals:
Students will:

- Use decimal notation for fractions with denominators 10 or 100.
- Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.
- Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.
- Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.

Objectives:

Students will be able to:

- Use operations to solve problems involving decimals, including converting between fractions and decimals (may include word problems) (DOK – Level One)

- Record tenths and hundredths as fractions and decimals (DOK – Level One)

- Translate among representations of fractions, decimals, and money (DOK – Level Two)

- Add fractions where the denominators are 10 or 100 (DOK – Level Two)

- Compare decimals to hundredths by reasoning about their size (DOK – Level One)

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Mathematical Standard Areas:
2.3. Geometry, A) Geometry
Two-Dimensional Figures

Standards Addressed: CC.2.3.4. A.1, CC.2.3.4. A.2, CC.2.3.4. A.3
Link to Standards in SAS
http://static.pdesas.org/content/documents/PA%20Core%20Standards%20Mathematics%20PreK-12%20March%202014.pdf

Goals:
Students will:

- Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
- Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.
- Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.
- Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.

Objectives:

Students will be able to:

- Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures (DOK – Level One)

- Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles (DOK – Level One)

- Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into mirroring parts. Identify line-symmetric figures and draw lines of symmetry (up to two lines of symmetry) (DOK – Level One)

- Use numbers and symbols to model the concepts of expressions and equations (DOK - Level Two)

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<u>Mathematical Standard Areas:</u>
2.3. Geometry, A) Geometry
Angles

Standards Addressed: CC.2.4.4. A.6
Link to Standards in SAS
http://static.pdesas.org/content/documents/PA%20Core%20Standards%20Mathematics%20PreK-12%20March%202014.pdf

Goals:
Students will:

- An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles.
- An angle that turns through n one-degree angles is said to have an angle measure of n degrees.
- Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.
- Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.

Objectives:

Students will be able to:

- Relate angles and fractional parts of a circle (DOK – Level Two)

- Relate degrees to fractional parts of a circle by understanding that an angle that measures *n* degrees turns through *n/360* of a circle (DOK – Level Three)

- Measure angles in whole-number degrees using a protractor. With the aid of a protractor, sketch angles of specified measure (DOK – Level Two)

- Solve addition and subtraction problems to find unknown angles on a diagram in real-world and mathematical problems (Angles must be adjacent and non-overlapping.) (DOK – Level Three)

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Mathematical Standard Areas:
2.4 Measurement, Data, and Probability, A) Measurement and Data
Relative Sizes of Measurement Units

Standards Addressed: CC.2.4.4. A.1, CC.2.4.4. A.2, CC.2.2.3. A.4, CC.2.4.4. A.4, CC.2.2.4.A.1
Link to Standards in SAS
http://static.pdesas.org/content/documents/PA%20Core%20Standards%20Mathematics%20PreK-12%20March%202014.pdf

Goals:
Students will:

- Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.
- Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots.
- Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.
- Write time as the amount of minutes before or after the hour
- Collect and display data in different ways

Objectives:

Students will be able to:

- Know relative sizes of measurement units within one system; including standard units (in., ft., yd., mi; oz., lb.; and c., pt., qt., gal.), metric units (cm, m, km, g, kg, and mL, L), and time (sec., min., hr., day, wk., mo., and yr.). Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit a table of equivalencies will be provided (DOK - Level One)

- Use the four operations to solve word problems involving distances, intervals of time

(such as elapsed time), liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit (DOK - Level Two)

- Identify time (analog and digital) as the amount of minutes before or after the hour (DOK - Level One)

- Solve a multiple step problem, supporting with a mathematical explanation that justifies the answer (DOK - Level Three)

- Formulate an original problem given a situation (DOK - Level Three)

- Make a line plot to display data set of measurements in fractions of a unit (e.g., intervals of ½, ¼, or ⅛) (DOK - Level One)

- Solve problems involving addition and subtraction of fractions by using information presented in line plots (line plots must be labeled with common denominators, such as ¼, 2/4, ¾) (DOK - Level Two)

- Translate information from one type of display to another (table, chart, bar graph, or pictograph) (DOK - Level Two)

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Mathematical Standard Areas:
2.2 Algebraic Concepts, B) Expressions and Equations
Algebra: Perimeter and Area

Standards Addressed: CC.2.2.4. A.1
Link to Standards in SAS
http://static.pdesas.org/content/documents/PA%20Core%20Standards%20Mathematics%20PreK-12%20March%202014.pdf

Goals:
Students will:

- Apply the area and perimeter formulas for rectangles in real world and mathematical problems.

Objectives:

Students will be able to:

- Apply the area and perimeter formulas for rectangles in real-world and mathematical problems for known and unknown measures (may include finding a missing side length) Whole numbers only. The formulas will be provided (DOK - Level Two)

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Mathematical Standard Areas:
Numbers and Operations
Algebraic Concepts
Measurement, Data, and Probability

Getting Ready for Grade 5:
- Subtract Related Fractions
- Add Related Fractions
- Algebra: Order of Operations
- Area and Tiling
- Multiply Three Factors
- Find Area of a Base
- Locate Points on a Grid

Standards Addressed: CC.2.1.5. C.1 ,CC.2.2.5.A.1, CC.2.4.5.A.5, CC.2.1.5.B.2 ,CC.2.3.5.A.1
Link to Standards in SAS
http://static.pdesas.org/content/documents/PA%20Core%20Standards%20Mathematics%20PreK-12%20March%202014.pdf

Goals:
Students will:
- Use the understanding of equivalency to add and subtract fractions
- Interpret and evaluate numerical expressions using order of operations.
- Apply concepts of volume to solve problems and relate volume to multiplication and to addition.
- Extend an understanding of operations with whole numbers to perform operations including decimals
- Graph points in the first quadrant on the coordinate plane and interpret these points when solving real world and mathematical problems.

Objectives:
Students will be able to:
- Subtraction fractions when one denominator is a multiple of the other (DOK Level - Two)
- Add fractions when one denominator is a multiple of the other (DOK Level - Two)
- Use concepts to solve non-routine problems; the order of operations to find the value of expressions (DOK Level - Three)
- Use tiling to find the area of a rectangle (DOK Level - One)
- Find the product of three factors (DOK Level - One)
- Find the area of the base of a rectangular prism (DOK Level - Two)
- Use ordered pairs to locate points on a grid (DOK Level - One)

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Assessments: See District Assessment Plan*

- Core Program Assessment
- STAR Math
- Basic Fact Fluency Assessment
- Classroom Diagnostic Tool (CDT)
- Teacher observations, questions, discussions
- Homework

Extensions:

- Core Program Resources
- Rocket Math
- Fast Math
- Xtra Math
- Study Island (lesson links)
- Smart Exchange
- Khan Academy
- www.commoncoresheets.com

Correctives:

- Core Program Resources
- Rocket Math
- Fast Math
- Xtra Math
- Study Island (lesson links)
- SmartBoard Exchange
- Khan Academy
- www.commoncoresheets.com

Materials and Resources:

- Rocket Math
- Fast Math
- Core Program Resources
- www.commoncoresheets.com