

Wilson Area School District Planned Course Guide

Title of planned course: Mathematics Grade 4

Subject Area: Math

Grade Level: 4

Course Description: This course will work on students' prior knowledge to build a strong foundation in whole numbers, addition, subtraction, multiplication, division, fractions, and decimals. Students will focus on multiplying and dividing by one and two digit numbers, adding and subtracting fractions, and basic measurement and geometric concepts.

Time/Credit for this Course: One Full Academic Year

Curriculum Writing Committee: Liz Falcone and Doug Schneck

Wilson Area School District Planned Course Materials

Course Title: Mathematics Grade 4

Textbook: enVision Mathematics Common Core 2020 Grade 4
Scott Foresman - Savvas Learning Company

Supplemental Books: Previous textbook resources for use with differentiating instruction

Teacher Resources:

- Manuals & resource books
- Manipulatives
- Student books
- Savvas Website

Curriculum Map

August:

- Diagnostic testing – review of 3rd grade material

September:

- Topic 1- Generalize Place Value Understanding (7 days)
- Topic 2- Fluently Add and Subtract Multi-Digit Whole Numbers (10 days)

October:

- Topic 3- Use Strategies and Properties to Multiply by 1 Digit Numbers (10 days)
- Topic 4- Use Strategies and Properties to Multiply by 2 Digit Numbers (9 days)

November:

- Topic 6- Use Operations with Whole Numbers to Solve Problems (8 days)
- Topic 7- Factors and Multiples (7 days)

December:

- Topic 8- Extend Understanding of Fraction Equivalence and Ordering (10 days)
- Topic 9- Understanding Addition and Subtraction of Fractions: lessons 1-6 (7 days including test)

January:

- Topic 9- Understanding Addition and Subtraction of Fractions: lessons 7-10 (6 days including test)
- Topic 10- Extend Multiplication Concepts to Fractions (7 days)
- Topic 11- Represent and Interpret Data on Line Plots (7 days)

February:

- Topic 12- Understand and Compare Decimals (9 days)
- Topic 13-Measurement: Find Equivalence in Units of Measure (16 total days)

March:

- Topic 13-Measurement: Find Equivalence in Units of Measure (Finish remaining 5 days)
- Topic 14- Algebra: Generate and Analyze Patterns (7 days)
- Topic 15- Geometric Measurement: Understand Concepts of Angles and Angle Measurement (10 days)

April:

- Topic 16- Lines, Angles, and Shapes (9 days)
- PSSA review

May/June:

- Topic 5- Use Strategies and Properties to Divide by 2 Digit Numbers (12 days)
- Topic 17 Step-Up to Grade 5 Lessons

Curriculum Scope & Sequence

Planned Course: Mathematics Grade 4

Unit: Topic 1 - Generalize Place Value Understanding

Time frame: 7 days

State Standards: CC.2.1.4.B.1 Apply place-value concepts to show an understanding of multi-digit whole numbers.

Anchor(s) or adopted anchor: M04.A-T.1.1.-4

Essential content/objectives: At end of the unit, students will be able to:

- Read and write numbers through one million in expanded form, with numerals, and using number names
- Recognize the relationship between adjacent digits in a multi-digit number
- Use place value to compare multi-digit whole numbers
- Use place value to round multi-digit numbers
- Use previously learned concepts and skills to construct arguments about place value

Core Activities: Students will complete/participate in the following:

- Lesson 1-1: Numbers Through One Million
- Lesson 1-2: Place Value Relationships
- Lesson 1-3: Compare Whole Numbers
- Lesson 1-4: Round Whole Numbers
- Lesson 1-5: Construct Arguments - Problem Solving

Extensions:

- Use of enrichment or challenge activities
- Activities at centers or stations
- Math Games
- Pick a Project
- STEM project
- Home-school connection
- Problem Solving Leveled Reading Mats

Remediation:

- Use of differentiated instruction/intervention activities
- Small group / 1 on 1
- Digital Math practice animations
- Digital Practice Buddy Fluency practice/animations
- Vocabulary reviews and reteaching workbook pages
- Moby Max

Instructional Methods:

- Teacher-led instruction
- Differentiated instruction

Materials & Resources:

- Hands-on materials
- enVision student edition workbook
- Savvas website materials

Assessments:

- Quick checks
- Fluency practice/assessment masters
- Homework pages
- Performance task
- Topic assessment

Curriculum Scope & Sequence

Planned Course: Mathematics Grade 4

Unit: Topic 2: Fluently Add and Subtract Multi-Digit Whole Numbers

Time frame: 10 days

State Standards: CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic

Anchor(s) or adopted anchor: M04.A-T.2.1.1 ; M04.A-T.2.1.4

Essential content/objectives: At end of the unit, students will be able to:

- Add and subtract whole numbers mentally using a variety of methods
- Round greater whole numbers to estimate sums and differences
- Add 3 digit numbers using place value concepts and the standard algorithm
- Add numbers to one million with and without regrouping using the standard algorithm
- Use place value and the standard algorithm to subtract whole numbers
- Use number sense and regrouping to subtract across zeros
- Use previously learned concepts and skills to reason abstractly and make sense of quantities and their relationships in problem situations

Core Activities: Students will complete/participate in the following:

- Lesson 2-1: Finding Sums and Differences with Mental Math
- Lesson 2-2: Estimate Sums and Differences
- Lesson 2-3: Add Whole Numbers
- Lesson 2-4: Add Greater Numbers
- Lesson 2-5: Subtract Whole Numbers
- Lesson 2-6: Subtract Greater Numbers
- Lesson 2-7: Subtract Across Zeros
- Lesson 2-8: Reasoning Problem Solving

Extensions:

- Use of enrichment or challenge activities
- Activities at centers or stations
- Math Games
- Pick a Project
- STEM project
- Home-school connection
- Problem Solving Leveled Reading Mats

Remediation:

- Use of differentiated instruction/intervention activities
- Small group / 1 on 1
- Digital Math practice animations
- Digital Practice Buddy Fluency practice/animations
- Vocabulary reviews and reteaching workbook pages
- Moby Max

Instructional Methods:

- Teacher-led instruction
- Differentiated instruction

Materials & Resources:

- Hands-on materials
- enVision student edition workbook
- Savvas website materials

Assessments:

- Quick checks
- Fluency practice/assessment masters
- Homework pages
- Performance task
- Topic assessment

Curriculum Scope & Sequence

Planned Course: Mathematics Grade 4

Unit: Topic 3: Use Strategies and Properties to Multiply 1 Digit Numbers

Time frame: 10 days

State Standards: CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic

Anchor(s) or adopted anchor: M04.A-T.2.1.2 ; M04.A-T.2.1.4

Essential content/objectives: At end of the unit, students will be able to:

- Multiply multiples of 10, 100, and 1,000 using mental math and place value strategies
- Use rounding to estimate products, and check if answers are reasonable
- Use arrays and partial products to multiply 2 and 3 digit numbers by 1 digit numbers
- Use area models and the Distributive Property to multiply larger numbers
- Use place value and partial products to multiply 3 and 4 digit numbers by 1 digit numbers
- Use place value and properties of operations to multiply mentally
- Choose an appropriate strategy to multiply 2, 3, and 4 digit numbers by 1 digit numbers
- Use previously learned concepts and skills to represent and solve problems

Core Activities: Students will complete/participate in the following:

- Lesson 3-1: Multiply by Multiples of 10, 100, and 1,000
- Lesson 3-2: Estimate Products
- Lesson 3-3: Use Arrays and Partial Products to Multiply
- Lesson 3-4: Use Area Models and Partial Products to Multiply
- Lesson 3-5: Use More Area Models and Partial Products to Multiply
- Lesson 3-6: Mental Math Strategies for Multiplication
- Lesson 3-7: Choose a Strategy to Multiply
- Lesson 3-8: Model with Math: Problem Solving

Extensions:

- Use of enrichment or challenge activities
- Activities at centers or stations
- Math Games
- Pick a Project
- STEM project
- Home-school connection
- Problem Solving Leveled Reading Mats

Remediation:

- Use of differentiated instruction/intervention activities
- Small group / 1 on 1
- Digital Math practice animations
- Digital Practice Buddy Fluency practice/animations
- Vocabulary reviews and reteaching workbook pages
- Moby Max

Instructional Methods:

- Teacher-led instruction
- Differentiated instruction

Materials & Resources:

- Hands-on materials
- enVision student edition workbook
- Savvas website materials

Assessments:

- Quick checks
- Fluency practice/assessment masters
- Homework pages
- Performance task
- Topic assessment

Curriculum Scope & Sequence

Planned Course: Mathematics Grade 4

Unit: Topic 4 - Use Strategies and Properties to Multiply by 2 Digit Numbers

Time frame: 9 days

State Standards: CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic

Anchor(s) or adopted anchor: M4.A.2, M4.A.3; M04.A-T.2.1.2 ; M04.A-T.2.1.4

Essential content/objectives: At end of the unit, students will be able to:

- Use mental math strategies to multiply 2 digit multiples of 10 by 2 digit multiples of 10
- Use models and properties of operations to multiply 2 digit numbers by multiples of 10
- Use rounding or compatible numbers to estimate products of two 2 digit numbers
- Use arrays, place value, partial products, and properties of operations to multiply two 2 digit numbers
- Use the Distributive Property and an area model to multiply two 2 digit numbers
- Use place value and partial products to calculate products of 2 digit by 2 digit multiplication problems
- Make sense of problems and persevere in solving them

Core Activities: Students will complete/participate in the following:

- Lesson 4-1: Multiply Multiples of 10
- Lesson 4-2: Use Models to Multiply 2 Digit Numbers by Multiples of 10
- Lesson 4-3: Estimate: Use Rounding or Compatible Numbers
- Lesson 4-4: Arrays and Partial Products
- Lesson 4-5: Area Models and Partial Products
- Lesson 4-6: Use Partial Products to Multiply 2 Digit Numbers
- Lesson 4-7: Make Sense and Persevere Problem Solving

Extensions:

- Use of enrichment or challenge activities
- Activities at centers or stations
- Math Games
- Pick a Project
- STEM project
- Home-school connection
- Problem Solving Leveled Reading Mats

Remediation:

- Use of differentiated instruction/intervention activities
- Small group / 1 on 1
- Digital Math practice animations
- Digital Practice Buddy Fluency practice/animations
- Vocabulary reviews and reteaching workbook pages
- Moby Max

Instructional Methods:

- Teacher-led instruction
- Differentiated instruction

Materials & Resources:

- Hands-on materials
- enVision student edition workbook
- Savvas website materials

Assessments:

- Quick checks
- Fluency practice/assessment masters
- Homework pages
- Performance task
- Topic assessment

Curriculum Scope & Sequence

Planned Course: Mathematics Grade 4

Unit: Topic 5 - Use Strategies and Properties to Divide 1 Digit Numbers

Time frame: 12 days

State Standards: State Standards: CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic

Anchor(s) or adopted anchor: M04.A-T.2.1.3

Essential content/objectives: At end of the unit, students will be able to:

- Use mental math and place value strategies to divide multiples of 10 and 100 by 1 digit divisors
- Use compatible numbers to estimate quotients
- Use place value patterns and division facts to estimate quotients for 4 digit dividends
- Solve division problems and interpret remainders
- Use partial quotients to divide
- Use partial quotients and place value understandings to divide with greater dividends
- Use place value models to divide 2 and 3 digit numbers by 1 digit numbers
- Choose a strategy to divide that follows a series of steps to break division into simpler calculations
- Use previously learned concepts and skills to model and solve problems

Core Activities: Students will complete/participate in the following:

- Lesson 5-1: Mental Math: Find Quotients
- Lesson 5-2: Mental Math: Estimate Quotients
- Lesson 5-3: Mental Math: Estimate Quotients for Greater Dividends
- Lesson 5-4: Interpret Remainders
- Lesson 5-5: Use Partial Quotients to Divide
- Lesson 5-6: Use Partial Quotients to Divide: Greater Dividends
- Lesson 5-7: Use Sharing to Divide
- Lesson 5-8: Continue Sharing to Divide
- Lesson 5-9: Choose a Strategy to Divide
- Lesson 5-10: Model with Math - Problem Solving

Extensions:

- Use of enrichment or challenge activities
- Activities at centers or stations
- Math Games
- Pick a Project
- STEM project
- Home-school connection
- Problem Solving Leveled Reading Mats

Remediation:

- Use of differentiated instruction/intervention activities
- Small group / 1 on 1
- Digital Math practice animations
- Digital Practice Buddy Fluency practice/animations
- Vocabulary reviews and reteaching workbook pages
- Moby Max

Instructional Methods:

- Teacher-led instruction
- Differentiated instruction

Materials & Resources:

- Hands-on materials
- enVision student edition workbook
- Savvas website materials

Assessments:

- Quick checks
- Fluency practice/assessment masters
- Homework pages
- Performance task
- Topic assessment

Curriculum Scope & Sequence

Planned Course: Mathematics Grade 4

Unit: Topic 6: Use Operations with Whole Numbers to Solve Problems

Time frame: 8 days

State Standards: State Standards:

- CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic.
- CC.2.2.4.A.1 Represent and solve problems involving the four operations.

Anchor(s) or adopted anchor: M04.B-O.1.1.1-4

Essential content/objectives: At end of the unit, students will be able to:

- Interpret comparisons as multiplication or addition equations
- Use multiplication and division to compare two quantities
- Model and solve multi-step problems by finding hidden questions and using bar diagrams and equations
- Model and solve multi-step problems and check that answers are reasonable
- Solve multi-step problems by writing and solving one or more equations
- Make sense of a multi-step problem and keep working until it is solve

Core Activities: Students will complete/participate in the following:

- Lesson 6-1: Solve Comparison Problems
- Lesson 6-2: Continue to Solve Comparison Problems
- Lesson 6-3: Model Multi-Step Problems
- Lesson 6-4: More Model Multi-Step Problems
- Lesson 6-5: Solve Multi-Step Problems
- Lesson 6-6: Make Sense and Persevere Problem Solving
- Lesson: PA-1: True Equations

Extensions:

- Use of enrichment or challenge activities
- Activities at centers or stations
- Math Games
- Pick a Project
- STEM project
- Home-school connection
- Problem Solving Leveled Reading Mats

Remediation:

- Use of differentiated instruction/intervention activities
- Small group / 1 on 1
- Digital Math practice animations
- Digital Practice Buddy Fluency practice/animations
- Vocabulary reviews and reteaching workbook pages
- Moby Max

Instructional Methods:

- Teacher-led instruction
- Differentiated instruction

Materials & Resources:

- Hands-on materials
- enVision student edition workbook
- Savvas website materials

Assessments:

- Quick checks
- Fluency practice/assessment masters
- Homework pages
- Performance task
- Topic assessment

Curriculum Scope & Sequence

Planned Course: Mathematics Grade 4

Unit: Topic 7: Factors and Multiples

Time frame: 7 days

State Standards: CC.2.2.4.A.2 Develop and/or apply number theory concepts to find factors and multiples

Anchor(s) or adopted anchor: M04.B-O.2.1.1

Essential content/objectives: At end of the unit, students will be able to:

- Use arrays to find factors of a given whole number
- Use multiplication to find all the factor pairs for a whole number
- Use repeated reasoning to generalize how to solve problems that are similar
- Use factors to determine whether a whole number greater than 1 is prime or composite
- Use multiplication to find multiples of a given whole number

Core Activities: Students will complete/participate in the following:

- Lesson 7-1: Understand Factors
- Lesson 7-2: Factors
- Lesson 7-3: Repeated Reasoning
- Lesson 7-4: Prime and Composite Numbers
- Lesson 7-5: Multiples

Extensions:

- Use of enrichment or challenge activities
- Activities at centers or stations
- Math Games
- Pick a Project
- STEM project
- Home-school connection
- Problem Solving Leveled Reading Mats

Remediation:

- Use of differentiated instruction/intervention activities
- Small group / 1 on 1
- Digital Math practice animations
- Digital Practice Buddy Fluency practice/animations
- Vocabulary reviews and reteaching workbook pages
- Moby Max

Instructional Methods:

- Teacher-led instruction
- Differentiated instruction

Materials & Resources:

- Hands-on materials
- enVision student edition workbook
- Savvas website materials

Assessments:

- Quick checks
- Fluency practice/assessment masters
- Homework pages
- Performance task
- Topic assessment

Curriculum Scope & Sequence

Planned Course: Mathematics Grade 4

Unit: Topic 8: Extend Understanding of Fraction Equivalence and Ordering

Time frame: 10 days

State Standards: CC.2.1.4.C.1 Extend the understanding of fractions to show equivalence and ordering

Anchor(s) or adopted anchor: M04.A-F.1.1.1-2

Essential content/objectives: At end of the unit, students will be able to:

- Use area models to recognize and generate equivalent fractions
- Use a number line to locate and identify equivalent fractions
- Use multiplication to find equivalent fractions
- Use division to find equivalent fractions
- Use benchmarks, area models, and number lines to compare fractions
- Use models or rename fractions to compare
- Order fractions from least to greatest and greatest to least
- Construct arguments about fractions

Core Activities: Students will complete/participate in the following:

- Lesson 8-1 Equivalent Fractions: Area Models
- Lesson 8-2 Equivalent Fractions: Number Lines
- Lesson 8-3 Generate Equivalent Fractions: Multiplication
- Lesson 8-4 Generate Equivalent Fractions: Division
- Lesson 8-5 Use Benchmarks to Compare Fractions
- Lesson 8-6 Compare Fractions
- *Additional activities on ordering 3 or more fractions (not included in the series)
- Lesson 8-7 Problem Solving Construct Arguments

Extensions:

- Use of enrichment or challenge activities
- Activities at centers or stations
- Math Games
- Pick a Project
- STEM project
- Home-school connection
- Problem Solving Leveled Reading Mats

Remediation:

- Use of differentiated instruction/intervention activities
- Small group / 1 on 1
- Digital Math practice animations
- Digital Practice Buddy Fluency practice/animations
- Vocabulary reviews and reteaching workbook pages
- Moby Max

Instructional Methods:

- Teacher-led instruction
- Differentiated instruction

Materials & Resources:

- Hands-on materials
- enVision student edition workbook
- Savvas website materials

Assessments:

- Quick checks
- Fluency practice/assessment masters
- Homework pages
- Performance task
- Topic assessment

Curriculum Scope & Sequence

Planned Course: Mathematics Grade 4

Unit: Topic 9 - Understand Addition and Subtraction of Fractions

Time frame: 12 days

State Standards: CC.2.1.4.C.2 Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers

Anchor(s) or adopted anchor: M04.A-F.2

Essential content/objectives: At end of the unit, students will be able to:

- Use fraction strips and number lines to add fractions
- Decompose a fraction or mixed number into a sum of fractions in more than one way
- Solve problems involving joining parts of the same whole by adding fractions with like denominators
- Use tools such as fraction strips, area models, and number lines to subtract fractions
- Solve problems involving separating parts of the same whole by subtracting fractions
- Count forward or backward on a number line to add or subtract
- Use models and equivalent fractions to add and subtract mixed numbers
- Use equivalent fractions and properties of operations to add mixed numbers with like denominators
- Use equivalent fractions, properties of operations, and the relationship between addition and subtraction to subtract mixed numbers with like denominators
- Use previously learned concepts and skills to represent and solve problems

Core Activities: Students will complete/participate in the following:

- Lesson 9-1 Model Addition of Fractions
- Lesson 9-2 Decompose Fractions
- Lesson 9-3 Add Fractions with Like Denominators
- Lesson 9-4 Model Subtraction of Fractions
- Lesson 9-5 Subtract Fractions with Like Denominators
- Lesson 9-6 Add and Subtract Fractions with Like Denominators
- Lesson 9-7 Model Addition and Subtraction of Mixed Numbers
- Lesson 9-8 Add Mixed Numbers
- Lesson 9-9 Subtract Mixed Numbers
- Lesson 9-10 Model with Math Problem Solving

Extensions:

- Use of enrichment or challenge activities
- Activities at centers or stations
- Math Games
- Pick a Project
- STEM project
- Home-school connection
- Problem Solving Leveled Reading Mats

Remediation:

- Use of differentiated instruction/intervention activities
- Small group / 1 on 1
- Digital Math practice animations
- Digital Practice Buddy Fluency practice/animations
- Vocabulary reviews and reteaching workbook pages
- Moby Max

Instructional Methods:

- Teacher-led instruction
- Differentiated instruction

Materials & Resources:

- Hands-on materials
- enVision student edition workbook
- Savvas website materials

Assessments:

- Quick checks
- Fluency practice/assessment masters
- Homework pages
- Performance task
- Topic assessment

Curriculum Scope & Sequence

Planned Course: Mathematics Grade 4

Unit: Topic 10: Extend Multiplication Concepts to Fractions

Time frame: 7 days

State Standards:

- CC.2.1.4.C.2 Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.
- CC.2.4.4.A.1 Solve problems involving measurement and conversions from a larger unit to a smaller unit.

Anchor(s) or adopted anchor: M04.A-F.2; M04.D-M.1

Essential content/objectives: At end of the unit, students will be able to:

- Use a model, repeated addition, and multiplication to understand a fraction as a multiple of a unit fraction.
- Use models to multiply fractions by whole numbers
- Use symbols and equations to multiply a fraction by a whole number
- Use the four operations to solve problems involving time
- Use previously learned concepts and skills to represent and solve problems

Core Activities: Students will complete/participate in the following:

- Lesson 10-1: Fractions as multiples of unit fractions
- Lesson 10-2: Multiply a fraction by a whole number using models
- Lesson 10-3: Multiply a fraction by a whole number using symbols
- Lesson 10-4: Solve time problems
- Lesson 10-5: Model with math in problem solving

Extensions:

- Use of enrichment or challenge activities
- Activities at centers or stations
- Math Games
- Pick a Project
- STEM project
- Home-school connection

Remediation:

- Use of differentiated instruction/intervention activities
- Small group / 1 on 1
- Digital Math practice animations
- Digital Practice Buddy Fluency practice/animations
- Vocabulary reviews and reteaching workbook pages
- Moby Max

Instructional Methods:

- Teacher-led instruction
- Differentiated instruction

Materials & Resources:

- Hands-on materials, including clocks and fraction strips
- enVision student edition workbook
- Savvas website materials

Assessments:

- Quick checks
- Fluency practice/assessment masters
- Homework pages
- Digital Practice Buddy Fluency practice
- Performance task
- Topic assessment

Curriculum Scope & Sequence

Planned Course: Mathematics Grade 4

Unit: Topic 11: Understand and Compare Decimals

Time frame: 7 days

State Standards:

- CC.2.1.4.C.2 Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.
- C.2.4.4.A.4 Represent and interpret data involving fractions using information provided in a line plot

Anchor(s) or adopted anchor: M04.A-F.2; M04.D-M.2

Essential content/objectives: At end of the unit, students will be able to:

- Read and interpret data using line plots
- Represent data using line plots and interpret data in line plots to solve problems
- Solve problems involving line plots and fractions
- Read and interpret data using bar graphs, line plots, and pictographs
- Critique the reasoning of others using an understanding of line plots

Core Activities: Students will complete/participate in the following:

- Lesson 11-1: Read line plots
- Lesson 11-2: Make line plots
- Lesson 11-3: Use line plots to solve problems
- *PA-2 Use different data displays
- Lesson 11-4: Critique reasoning in problem solving

Extensions:

- Use of enrichment or challenge activities
- Activities at centers or stations
- Math Games
- Pick a Project
- STEM project
- Home-school connection
- Class data collection activities and creation of line plots using them

Remediation:

- Use of differentiated instruction/intervention activities
- Small group / 1 on 1
- Digital Math practice animations
- Digital Practice Buddy Fluency practice/animations
- Vocabulary reviews and reteaching workbook pages
- Moby Max

Instructional Methods:

- Teacher-led instruction
- Differentiated instruction

Materials & Resources:

- Hands-on materials, including number lines and fraction strips
- enVision student edition workbook
- Savvas website materials

Assessments:

- Quick checks
- Fluency practice/assessment masters
- Homework pages
- Digital Practice Buddy Fluency practice
- Performance task
- Topic assessment

Curriculum Scope & Sequence

Planned Course: Mathematics Grade 4

Unit: Topic 12: Understand and Compare Decimals

Time frame: 9 days

State Standards:

- CC.2.1.4.C.3 Connect decimal notation to fractions, and compare decimal fractions
- CC.2.4.4.A.1 Solve problems involving measurement and conversions from a larger unit to a smaller unit.

Anchor(s) or adopted anchor: M04.A-F.3; M04.D-M.1

Essential content/objectives: At end of the unit, students will be able to:

- Relate fractions and decimals with denominators of 10 and 100
- Locate and describe fractions and decimals on number lines
- Compare decimals by reasoning about their size
- Order decimals from least to greatest and greatest to least
- Add fractions with denominators of 10 and 100 by using equivalent fractions
- Use fractions or decimals to solve word problems involving money
- Use the structure of the place value system for decimals to solve problems

Core Activities: Students will complete/participate in the following:

- Lesson 12-1: Fractions and Decimals
- Lesson 12-2: Fractions and decimals on the number line
- Lesson 12-3: Compare decimals
- *Additional activities on ordering 3 or more decimals (not included in the series)
- Lesson 12-4: Add fractions with denominators of 10 and 100
- Lesson 12-5: Solve word problems involving money
- Lesson 12-6: Look for and use structure in place value to solve problems

Extensions:

- Use of enrichment or challenge activities
- Activities at centers or stations
- Math Games
- Pick a Project
- STEM project
- Home-school connection

Remediation:

- Use of differentiated instruction/intervention activities
- Small group / 1 on 1
- Digital Math practice animations
- Digital Practice Buddy Fluency practice/animations
- Vocabulary reviews and reteaching workbook pages
- Moby Max

Instructional Methods:

- Teacher-led instruction
- Differentiated instruction

Materials & Resources:

- Hands-on materials, including decimal models, color counters, place value blocks, hundredths grids, and money manipulatives
- enVision student edition workbook
- Savvas website materials

Assessments:

- Quick checks
- Fluency practice/assessment masters
- Homework pages
- Digital Practice Buddy Fluency practice
- Performance task
- Topic assessment

Curriculum Scope & Sequence

Planned Course: Mathematics Grade 4

Unit: Topic 13: Measurement- Find Equivalence in Units of Measure

Time frame: 16 days

State Standards:

- CC.2.1.4.C.2 Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.
- CC.2.4.4.A.1 Solve problems involving measurement and conversions from a larger unit to a smaller unit.

Anchor(s) or adopted anchor: M04.A-F.2; M04.D-M.1

Essential content/objectives: At end of the unit, students will be able to:

- Recognize the relative size of customary units of length and convert from a larger unit to a smaller unit
- Recognize the relative size of customary units of capacity and convert from a larger unit to a smaller unit
- Recognize the relative size of customary units of weight and convert from a larger unit to a smaller unit
- Recognize the relative size of metric units of length and convert from a larger unit to a smaller unit
- Recognize the relative size of metric units of capacity and mass and convert from a larger unit to a smaller unit
- Find the unknown length or width of a rectangle using the known area or perimeter
- Be precise when solving measurement problems
- Tell time using a clock
- Use time phrases, addition and subtraction phrases to tell time (ex. 25 min. after 6, 35 min. before 7)
- Identify start time, end time, and elapsed time
- Solve problems which incorporate the ways to tell time

Core Activities: Students will complete/participate in the following:

- Lesson 13-1: Equivalence with customary units of length
- Lesson 13-2: Equivalence with customary units of capacity
- Lesson 13-3: Equivalence with customary units of weight
- Lesson 13-4: Equivalence with metric units of length
- Lesson 13-5: Equivalence with metric units of capacity and mass
- Lesson 13-6: Solve area and perimeter problems (break into separate lessons: basic area, basic perimeter, missing side area, missing side perimeter)
- Lesson 13-7: Use precision in problem solving
- *Lesson PA-3: Ways to tell time
- **Additional activities involving start time, end time, and elapsed time (not included in series)

Extensions:

- Use of enrichment or challenge activities
- Activities at centers or stations
- Math Games
- Pick a Project
- STEM project
- Home-school connection
- Gallon Man visual activity
- Area and perimeter Dream Home

Remediation:

- Use of differentiated instruction/intervention activities
- Small group / 1 on 1
- Digital Math practice animations
- Digital Practice Buddy Fluency practice/animations
- Vocabulary reviews and reteaching workbook pages
- Moby Max

Instructional Methods:

- Teacher-led instruction
- Differentiated instruction

Materials & Resources:

- Hands-on materials, including visual units (cups, pints, quarts, centimeter ruler and meter stick, etc.
- enVision student edition workbook
- Savvas website materials

Assessments:

- Quick checks
- Fluency practice/assessment masters
- Homework pages
- Digital Practice Buddy Fluency practice
- Performance task
- Topic assessment

Curriculum Scope & Sequence

Planned Course: Mathematics Grade 4

Unit: Topic 14: Algebra- Generate and Analyze Patterns

Time frame: 7 days

State Standards:

- CC.2.1.4.B.2 Use place value understanding and properties of operations to perform multi-digit arithmetic
- CC.2.2.4.A.4 Generate and analyze patterns using one rule

Anchor(s) or adopted anchor: M04.A-T.2; M04.B-O.3

Essential content/objectives: At end of the unit, students will be able to:

- Create or extend a number sequence based on a rule.
- Identify features of the pattern in the sequence that are not described by the rule
- Use a rule to extend a number pattern and solve a problem.
- Identify features of the pattern.
- Generate a shape pattern that follows a given rule and predict a shape in the pattern.
- Solve problems by using patterns

Core Activities: Students will complete/participate in the following:

- Lesson 14-1: Number sequences
- Lesson 14-2: Number rules in patterns
- Lesson 14-3: Repeating shapes in patterns
- Lesson 14-4: Look for and use structure to solve problems
- *Lesson PA-4: Function tables and rules

Extensions:

- Use of enrichment or challenge activities
- Activities at centers or stations
- Math Games
- Pick a Project
- STEM project
- Home-school connection

Remediation:

- Use of differentiated instruction/intervention activities
- Small group / 1 on 1
- Digital Math practice animations
- Digital Practice Buddy Fluency practice/animations
- Vocabulary reviews and reteaching workbook pages
- Moby Max

Instructional Methods:

- Teacher-led instruction
- Differentiated instruction

Materials & Resources:

- Hands-on materials, including pattern blocks
- enVision student edition workbook
- Savvas website materials

Assessments:

- Quick checks
- Fluency practice/assessment masters
- Homework pages
- Digital Practice Buddy Fluency practice
- Performance task
- Topic assessment

Curriculum Scope & Sequence

Planned Course: Mathematics Grade 4

Unit: Topic 15- Geometric Measurement: Understand Concepts of Angles and Angle Measurement

Time frame: 10 days (extra time allotted for protractor mastery)

State Standards:

- CC.2.3.4.A.1 Draw lines and angles and identify these in two-dimensional figures.
- CC.2.4.4.A.6 Measure angles and use properties of adjacent angles to solve problems

Anchor(s) or adopted anchor: M04.C-G.1; M04.D-M.3

Essential content/objectives: At end of the unit, students will be able to:

- Recognize and draw lines, rays, and angles with different measures.
- Identify lines as parallel, perpendicular, and intersecting.
- Find the measure of an angle that turns through a fraction of a circle
- Use known angle measures to measure unknown angles.
- Use a protractor to measure and draw angles
- Use addition and subtraction to solve problems with unknown angle measures.
- Identify complementary and supplementary angles.
- Use appropriate tools, such as a protractor or ruler, to solve problems.

Core Activities: Students will complete/participate in the following:

- Lesson 15-1: Classify points, lines, rays, line segments, and angles
- Lesson 15-2: Understand angles and unit angle measurement
- Lesson 15-3: Measure with unit angles
- Lesson 15-4: Measure and draw angles with a protractor
- Lesson 15-5: Find missing angles by adding and subtracting
*Additional activities involving complementary and supplementary (not included in series)
- Lesson 15-6: Solve problems using the appropriate tools

Extensions:

- Use of enrichment or challenge activities
- Activities at centers or stations
- Math Games
- Pick a Project
- STEM project
- Home-school connection

Remediation:

- Use of differentiated instruction/intervention activities
- Small group / 1 on 1
- Digital Math practice animations
- Digital Practice Buddy Fluency practice/animations
- Vocabulary reviews and reteaching workbook pages
- Moby Max

Instructional Methods:

- Teacher-led instruction
- Differentiated instruction

Materials & Resources:

- Hands-on materials, including protractors, pattern blocks, rulers, fraction strips
- enVision student edition workbook
- Savvas website materials

Assessments:

- Quick checks
- Fluency practice/assessment masters
- Homework pages
- Digital Practice Buddy Fluency practice
- Performance task
- Topic assessment

Curriculum Scope & Sequence

Planned Course: Mathematics Grade 4

Unit: Topic 16- Lines, Angles, and Shapes

Time frame: 9 days

State Standards:

- CC.2.2.4.A.4: Generate and analyze patterns using one rule.
- C.C.2.3.4.A.1: Draw lines and angles and identify these in two-dimensional figures.
- C.C.2.3.4.A.2: Classify two-dimensional figures by properties of their lines and angles.
- C.C.2.3.4.A.3: Recognize symmetric shapes and draw lines of symmetry.

Anchor(s) or adopted anchor: M04.B-O.3; M04.C-G.1

Essential content/objectives: At end of the unit, students will be able to:

- Draw and identify perpendicular, parallel, and intersecting lines
- Classify triangles by line segments and angles
- Classify quadrilaterals by lines and angles
- Recognize and draw lines of symmetry, identify symmetric figures
- Draw figures that have lines of symmetry
- Use understanding of two-dimensional shapes to critique reasoning of others
- *Classify polygons by number of sides

Core Activities: Students will complete/participate in the following:

- Lesson 16-1: Classify lines
- Lesson 16-2: Classify triangles
- Lesson 16-3: Classify quadrilaterals
- Lesson 16-4: Identify line symmetry
- Lesson 16-5: Draw figures with line symmetry
- Lesson 16-6: Explain their thinking in understanding of two-dimensional figures
- *Additional activities involving characteristics of polygons (closed, made of line segments) and specific names related to number of sides (pentagon, hexagon, etc.)

Extensions:

- Use of enrichment or challenge activities
- Activities at centers or stations
- Math Games
- Pick a Project
- STEM project
- Home-school connection
- Social studies connection: draw/locate figures on maps
- Polygon color by shape activities

Remediation:

- Use of differentiated instruction/intervention activities
- Small group / 1 on 1
- Digital Math practice animations
- Digital Practice Buddy Fluency practice/animations
- Vocabulary reviews and reteaching workbook pages
- Moby Max

Instructional Methods:

- Teacher-led instruction
- Differentiated instruction

Materials & Resources:

- Hands-on materials
- enVision student edition workbook
- Savvas website materials

Assessments:

- Quick checks
- Fluency practice/assessment masters
- Homework pages
- Performance task
- Topic assessment