# Northern Cambria School District

A Teacher/Parent/Student Friendly Curriculum Map

**Course Name:** 4th Grade Mathematics

**Course Description:**

In Fourth Grade mathematics, students learn and master procedures, concepts, and applications in all of these Common Core State Standards content domains: Numbers and Operations, Algebraic Concepts, Geometry, and Measurements, Data and Probability.

- Students will be working through the 4th Grade Everyday Math curriculum. During the course of the school year this class will cover 8 Units:

Unit 1 Place Value: Multidigit Addition and Subtraction
Unit 2 Multiplication and Geometry
Unit 3 Fractions and Decimals
Unit 4 Multi Digit Multiplication
Unit 5 Fraction and Mixed-Number Computation; Measurement
Unit 6 Division; Angles
Unit 7 Multiplication of a Fraction by a Whole Number; Measurement
Unit 8 Fraction Operations; Applications

- Students will complete SpringMath daily, This a paper/pencil invention process that enables students to achieve math fact and process mastery.

- Students will complete Study Island weekly. This is an online tool used to reinforce concepts taught in the Everyday Math curriculum

**Course Resources:**

Bell, M., & Bernstein, L. J. (2015). *Everyday Mathematics 4, Grade 4, Student Journal*. McGraw-Hill Education**.**

Bell, M., & Bernstein, L. J. (2015). *Everyday Mathematics 4, Grade 4, Home Link*. McGraw-Hill Education**.**

Sourcewell. (2023), *Spring Math* - a paper/pencil Math program that provides classwide and individual intervention of math skills items built from aligned standards with flexible modes to improve proficiency.

Edmentum. (2023), *Study Island* - a computer based program designed to improve mastery and retention by offering practice items built from aligned standards with flexible modes to improve proficiency

Renaissance Learning Inc. (2023), *Star Math*- a student-based, computer-adaptive assessment for measuring student achievement in math.

Projector
Notebooks
Computers

**End of Course Outcomes:**

Numbers and Operations (From PA ROADMAP)

- Place Value Properties of Operations: Demonstrate an understanding of multi-digit whole numbers. Compare and round multi-digit numbers. Perform multi-digit arithmetic.

- Fractions & Decimals: Demonstrate an understanding of fraction equivalence. Compare and order fractions. Solve problems involving fractions and mixed numbers, Use decimal notation for decimal fractions. Compare decimals and decimal fractions.

Algebraic Concepts

- Represent and Solve Problems, Number Theory, Patterns: Represent and solve problems verbally as equations. Use factors to represent numbers in various ways. Recognize that a whole number is a multiple of each of its factors. Generate and analyze patterns that follow a single rule.

Geometry

- Geometric Shapes and Figures: Draw and identify lines and angles. Classify shapes by properties of their lines and angles.

Measurement, Data and Probability

- Measurement, Data Displays: Solve problems involving measurements. Convert larger units to smaller units. Translate one type of data display to another. Represent and interpret data involving fractions.

**Major Subject Area Academic Standards Addressed:**

The following PA standards in mathematics will be covered in this course:

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

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

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

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

CC.2.1.4.C.3 Connect decimal notation to fractions, and compare decimal fractions (base 10 denominator, e.g. ,19/100).

CC.2.2.4.A.1 Represent and solve problems involving the four operations.

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

CC.2.2.4.A.4 Generate and analyze patterns using one rule

CC.2.3.4.A.1 Draw lines and angles and identify these in two-dimensional figures.

CC.2.3.4.A.2 Classify two-dimensional figures by properties of their lines and angles.

CC.2.3.4.A.3 Recognize symmetric shapes and draw lines of symmetry.

CC.2.4.4.A.1 Solve problems involving measurement and conversions from a larger unit to a smaller unit.

CC.2.4.4.A.2 Translate information from one type of data display to another.

CC.2.4.4.A.4 Represent and interpret data involving fractions using information provided in a line plot

CC.2.4.4.A.6 Measure angles and use properties of adjacent angles to solve problems.

**Course Concepts by Sequence with Short Description:**

| | | |
|---|---|---|
| August/September | Unit 1: Place Value: Multidigit Addition and Subtraction | CC.2.1.4.B.1, CC.2.1.4.B.2, CC.2.2.4.A.1, CC.2.2.4.A.4 CC.2.4.4.A.1, CC.2.3.4.A.1, CC.2.3.4.A.2 |
| October | Unit 2: Multiplication and Geometry | CC.2.1.4.B.2, CC.2.2.4.A.1, CC.2.2.4.A.2, CC.2.2.4.A.4 , CC.2.3.4.A.3, CC.2.3.4.A.2, CC.2.4.4.A.1 |
| November | Unit 3: Fractions and Decimals | CC.2.1.4.C.1, CC.2.1.4.C.3, CC.2.2.4.A.1, CC.2.2.4.A.2, CC.2.2.4.A.4, CC.2.4.4.A.1 |
| December | Unit 4: Multi-Digit Multiplication | CC.2.1.4.B.1, CC.2.1.4.B.2, CC.2.2.4.A.1, CC.2.3.4.A.2, CC.2.4.4.A.1 |
| January | Unit 5: Fraction and Mixed-Number Computation; Measurement | CC.2.1.4.B.1, CC.2.1.4.B.2, CC.2.1.4.C.1, CC.2.1.4.C.2, CC.2.1.4.C.3, CC.2.2.4.A.1, CC.2.3.4.A.1, CC.2.3.4.A.3, CC.2.4.4.A.1, CC.2.4.4.A.4, CC.2.4.4.A.6 |
| February | Unit 6: Division; Angles | CC.2.1.4.B.1, CC.2.1.4.B.2, CC.2.1.4.C.1, CC.2.1.4.C.2, CC.2.2.4.A.1, CC.2.2.4.A.2, CC.2.3.4.A.1, CC.2.4.4.A.1, CC.2.4.4.A.6 |
| March | Unit 7:Multiplication of a Fraction by a Whole Number; Measurement | CC.2.1.4.B.2, CC.2.1.4.C.1, CC.2.1.4.C.2, CC.2.1.4.C.3, CC.2.2.4.A.1, CC.2.2.4.A.4, CC.2.4.4.A.1, CC.2.4.4.A.4 |
| April | Unit 7: Multiplication of a Fraction by a Whole Number; Measurement | CC.2.1.4.B.2, CC.2.1.4.C.1, CC.2.1.4.C.2, CC.2.1.4.C.3, CC.2.2.4.A.1, CC.2.2.4.A.4, CC.2.4.4.A.1, CC.2.4.4.A.4 |
| May | Unit 8: Fraction Operations; | CC.2.1.4.B.2, CC.2.1.4.C.1, |

| | | |
|---|---|---|
| | Applications | CC.2.1.4.C.2, CC.2.1.4.C.3, CC.2.3.4.A.1, CC.2.3.4.A.3, CC.2.4.4.A.1, CC.2.4.4.A.4, CC.2.4.4.A.6 |

**Student Assessments:**

Unit Tests - An assessment given at the end of each unit which only focuses on the Everyday Math skills covered during that specific unit (Amount of Points will vary)
Unit Open Responses - Students will have to complete a written response to a question that has been covered during the unit Units 1, 3, 5, and 7 (a 4 point rubric provided at the end of each Unit will be used to grade)
Cumulative Assessments - A broad assessment of math skills covered from the beginning of the year until the point each assessment is given after units 2, 4, 6, and 8 (Amount of points will vary)
Spring Math Assessment - a teacher led paper/pencil skill mastery and fluency program completed daily through paired learning. This is assessed at beginning, middle, and end of year (not a grade)

Study Island - a data-driven standards mastery solution designed to help K–12 students master content specified by the Common Core State Standards. Assessments are given beginning and end of the year to show growth. Students work weekly on PA Common Core Standards (not a grade)
Star Math - student-based, computer-adaptive assessment for measuring student achievement in math taken at beginning, middle and end of year. (not grade)

**Grading:**

A - 100% to 92%
B - 91% to 83%
C - 82% to 74%
D - 73% to 65%
F - 64% to 0

75% of the grade will be comprised of the following: Unit Tests, Cumulative Tests, and Open Response

25% of the grade will be comprised of Home Links pages which will be completed in class and at home