

Subject: Mathematics

Resources: Big Ideas Text

Bigideas.com

***The Long-Range Plans are based on the NAD and NYS Curriculum Learning Standards.**

There will be an integration of faith and learning as per SDA beliefs. Summative final grades are based on select assignments (homework, class work, quiz, projects, essays, etc.) Exams – There will be at least 2 test each marking period.

Students will be tested on the following standards:

Mathematical Reasoning – Students use mathematical reasoning to analyze mathematical situations.

Number and Numeration- Students use number sense and numeration to develop an understanding of the multiple uses of number in the real world, use the numbers to communicate mathematically, and the use of numbers in the development of mathematical ideas.

Operations – Students use mathematical operations and relationships to understand mathematics.

Measurement – Students use measurement in both metric and English measure to provide a major link between abstractions of mathematics and the real world in order to describe and compare objects and data.

Uncertainty – Students use ideas of uncertainty to illustrate that mathematics involves more than exactness when dealing with everyday situations.

Patterns/Functions – Students use patterns and functions to develop mathematical power, and construct generalizations that describe patterns simply and efficiently.

NAD STANDARDS

Place Value

4.NO.1 Use place value understanding of multi-digit whole numbers to round to any place up to millions (4.NBT.1,3)

4.NO.2 Read, write, compare, and understand whole numbers using standard, number name, and expanded forms (4.NBT.2) ***Basic Operations***

4.NO.3 Add and subtract multi-digit whole numbers; multiply up to 4 digits X 1 digit and 2 digits X 2 digits; divide using a one-digit divisor and up to a four-digit dividend with and without a remainder (4.NBT.4,5,6)

Fractions/ Decimals

4.NO.4 Understand, express, and order fractions with different numerators and denominators; numerically express equivalent fractions (4.NF.1,2) 4.

NO.5 Add and subtract fractions and mixed numbers with common denominators; multiply fractions by whole numbers (4.NF.3,4)

4.NO.6 Understand, compare, and use decimal notation for fractions with denominators of 10 or 100 (4.NF.5,6,7)

Operations & Algebraic Thinking

Multiplication

4.OAT.1 Memorize and fluently multiply using the multiplication facts through 12 Problem Solving

4.OAT.2 Solve multi-step word problems including remainder interpretation and estimate to check; create equations with a letter for the unknown (4.OA.1,2,3)

Factors

4.OAT.3 Find all factor pairs for a whole number within 100; identify whole numbers as prime or composite (4.OA.4)

4.OAT.4 Understand the basic concepts of least common multiple (LCM) and greatest common factor (GCF)

Patterns

4.OAT.5 Generate and analyze number and shape patterns (4.OA.5)

Measurements

Measurement/ Conversion

4.M.1 Solve problems involving measurement (time, volume, mass, money, simple fractions, decimals, distance) (4.MD.2)

4.M.2 Convert measurement from a larger unit to a smaller unit (km, m, cm; kg, g; lb, oz; L, mL; hr, min, sec) (4.MD.1)

4.M.3 Apply area and perimeter formulas (4.MD.3) 4.M.4 Read a Fahrenheit and Celsius thermometer knowing the significance of 32°F, 212°F, 0°C, and 100°C

Angles

4.M.5 Recognize angles as geometric shapes that are formed wherever two rays share a common end point; understand concepts of angle measurement and measure angles in whole-number degrees (4.MD.5,6,7)

Money

4.M.6 Know how to count up to make change

Geometry

Lines/Angles

4.GEO.1 Draw and identify points, lines, line segments, rays, angles, and perpendicular and parallel lines (4.G.1)

4.GEO.2 Classify figures with perpendicular and parallel lines, and angles of a specified size (4.G.2)

4.GEO.3 Recognize and draw lines of symmetry with two-dimensional figures (4.G.3)

Data Analysis/ Statistics, & Probability

Data

4.DSP.1 Solve addition and subtraction problems using a line plot to display a data set of measurement in fractions of a unit (halves, fourths, and eighths) (4.MD.4)

	First Marking Period				
Weeks	Standards NAD	Topics	Objectives	Themes	Resources
Week 1	4.NO.1 4.NO.2	Chapter 1: Place Value Concepts	Students will understand how to find the value of a digit, develop accuracy in reading, writing, and identifying place value of numbers through millions.	Place Value and Number Sense Ch. 1 pp. 2 – 14	Textbook: Big Ideas Math Volume 1 Other Resource Material: GO Math; Common Core Coach
Week 2	4.NO.1 4.NO.2	Chapter 1: Place Value Concepts Cont.	Students will read, write, compare and order whole numbers using benchmark to find greater amounts, understand how to apply the skill and use a graph.	Compare and Round Multi- Digit Numbers Ch. 1 pp. 15 – 20	
Week 3	4.NO.1 4.NO.2	Chapter 1: Place Value Concepts Cont.	Students will read and write numbers; add and subtract greater numbers.	Compare and Round Multi- Digit Numbers Ch. 1 pp. 21 – 29	
Week 4	4.NO.3	Chapter 2: Add and Subtract Multi-Digit Numbers	Students will use algebraic expressions to add and subtract whole numbers.	Algebra: Estimate sums and differences Ch. 2 pp. 32-38	
Week 5	4.NO.3	Chapter 2: Add and Subtract Multi-Digit Numbers Cont.	Students will use algebraic expressions to add and subtract whole numbers. Develop skills and accuracy	Algebra: Subtract Multi-Digit Numbers Ch. 2 pp. 39 – 44	
Week 6	4.NO.3	Chapter 2: Add and Subtract Multi-Digit	Students will use algebraic expressions	Algebra: Subtract Multi-Digit Numbers	

		Numbers Cont.	to add and subtract whole numbers.	Ch. 2 pp. 45 – 56	
Week 7	4.NO.3			Algebra: Subtract Multi-Digit Numbers Ch. 2 pp. 57 – 65	
Week 8		Chapters 1 and 2 Revision			
Week 9	4.NO.3	Chapter 3: Multiplying by one-digit numbers	Students will read and write numbers and multiply by 10s, 100s, and 1000s. Develop skill and accuracy in multiplying by one-digit numbers.	Understand Multiplicative Comparisons Ch. 3 pp. 68 – 80	Textbook: Big Ideas Math Volume 1 Other Resource Material: GO Math; Common Core Coach
	Second Marking Period				
Week 1	4.NO.3	Chapter 3: Multiplying by one-digit numbers	Students will estimate, round numbers and use the distributive property to multiply by one-digit numbers. Develop skill and accuracy in multiplying by one-digit numbers.	Use distributive property to multiply Ch. 3 pp. 81 – 92	
Week 2	4.NO.3	Chapter 3: Multiplying by one-digit numbers	Students will use expanded form and partial products to multiply.	Use distributive property to multiply Ch. 3 pp. 93 – 104	
Week 3	4.NO.3	Chapter 3: Multiplying by 3 pp 105 - one-digit numbers	Students will estimate, expand, and multiply 2, 3 and 4-digit numbers by one-digit number.	Use expanded form of multiplication Ch. 116	

Week 4	4.NO.3 4.OAT.1 4.OAT.2	Chapter 3: Multiplying by one-digit numbers Chapter 3: Multiplying by one-digit numbers	Students will understand properties to multiply and problem solve multiplication problems. Develop problem solving skills.	Practice problem solving skills in Multiplication Ch.3 pp. 117 – 131	Textbook: Big Ideas Math Volume 1 Other Resource Material: GO Math; Common Core Coach
Week 5	4.NO.3 4.OAT.1	Chapter 4: Multiply by two-digit numbers	Students will multiply by 10s, estimate products, use distributive property to multiply two-digit numbers.	Practice Multiplication Facts Ch. 4 pp. 142 – 172	
Week 6	4.NO.3	Chapter 4: Multiply by two-digit numbers	Students will multiply by 10s, estimate products, use distributive property to multiply two-digit numbers.	Practice Multiplication Facts Ch. 4 pp. 173 – 190	Textbook: Big Ideas Math Volume 1 Other Resource Material: GO Math; Common Core Coach
Week 7	4.NO.3	Chapter 5: Divide multi-digit numbers by one-digit numbers.	Students will divide, estimate quotients, understand division and remainders.	Students will learn the relationship between multiplication and division facts, divide by 10s, 100s, and 1000s, estimate and problem solve. Ch. 5 pp. 198 – 228	
Week 8	4.NO.3	Chapter 5: Divide multi-digit numbers by one-digit numbers.	Students will use partial quotients with remainders and problem solve using	Divide multi-digit numbers by one one-digit numbers and problem solve. Ch. 5	

			division.	pp 229 – 255	
Week 9	4.OAT.3 4.OAT.4 4.OAT.5	Chapter 6: Factors, Multiples and patterns	To understand factors and divisibility and relate factors and multiples.	Relate factors and multiples. Ch. 6 pp 260 – 278	
Week 10	4.OAT.3 4.OAT.4 4.OAT.5	Chapter 6: Factors, Multiples and patterns	To identify prime and composite numbers, number patterns and shape patterns.	Examine and identify prime and composite numbers. Ch. 6 pp 279 – 299	
Week 11		Review Chapters 3, 4 and 5			
Week 12		Mid-Year Local Examination in Core Subjects			
	Third Marking Period				
Week 1	4.NO.4	Chapter 7: Understand fraction equivalence and comparison	Students will model and generate equivalent fractions.	Generate equivalent fractions by dividing. Ch.7 Pp. 304 - 322	Textbook: Big Ideas Math Volume 1 Other Resource Material: GO Math; Common Core Coach
Week 2	4.NO.4 4.NO.5	Chapter 7: Understand fraction equivalence and comparison		Comparing equivalent fractions. Ch. 7 pp 323 – 343	
Week 3	4.NO.3 4.NO.4 4.NO.5	Chapter 8: Add and subtract fractions	Students will add and subtract fractions with like denominators. They will also add and subtract mixed fractions and problem solve.	Adding and subtracting fractions with like denominators. Ch. 8 pp. 346 – 370	
Week 4	4.NO.5 4.NO.6 4.DSP.1	Chapter 8: Add and subtract fractions		Adding and subtracting mixed numbers and problem solve. Ch. 20 pp. 371 – 403	
Week 5		Mid-Year Revision			
Week 6		Mid-Year Examination			
Week 7	4.NO.3 4.NO.4	Chapter 9: Multiply whole numbers and	Students will understand multiples	Unit fractions and multiplying whole	Textbook: Big Ideas Math Volume 1

	4.NO.5 4.NO.6	fractions.	of unit fractions, fraction and multiply whole numbers and fractions.	numbers and fractions. Ch. 9 pp. 408 - 426	Other Resource Material: GO Math; Common Core Coach
Week8	4.NO.3 4.NO.4 4.NO.5 4.NO.6	Chapter 9: Multiply whole numbers and fractions.	Students will understand how to multiply whole numbers and mixed numbers and problem solve.	Multiply whole numbers by mixed numbers and problem solving. CH. 9 pp. 427 – 441	Textbook: Big Ideas Math Volume 1 Other Resource Material: GO Math; Common Core Coach
Week 9	4.NO.5 4.NO.6	Chapter 10: Relate fractions and decimals	Students will understand tenths, hundredths and decimal fractions.	Comparing decimal fractions. Ch. 10 pp. 444 – 468	Textbook: Big Ideas Math Volume 1 Other Resource Material: GO Math; Common Core Coach
Week 10	4.NO.5 4.NO.6	Chapter 10: Relate fractions and decimals	Students will add decimal fractions and decimals and money operations.	Add decimal fractions and money operations. Ch. 10 pp 469 - 489	Textbook: Big Ideas Math Volume 1 Other Resource Material: GO Math; Common Core Coach
Fourth Marking Period					
Week 1	4.M.1	Chapter 11: Understand measurement equivalence	Students will find and understand mass and capacity in metric units.	Lengths in metric units Ch. 11 pp 494 - 524	Textbook: Big Ideas Math Volume 1 Other Resource Material: GO Math; Common Core Coach
Week 2	4.M.1 4.M.2	Chapter 11: Understand measurement equivalence	Students will read clocks and understand the units of time and problem solve elapsed time.	Unites of time and finding elapsed time. Ch. 11 pp. 525 – 559	
Week 3	4.M.3	Chapter 12: Use perimeter and area	Finding perimeter and area using formula.	Measuring perimeter and finding area. Ch. 12 pp 562 -574	

Week 4	4.M.3	Chapter 12: Use perimeter and area	Students will find unknown measures and problem solve.	Finding unknown measures and problem solve. Ch. 12 pp 575 - 589	
Week 5	4.M.5 4.M.6 4.GEO.1	Chapter 13: Identify and draw lines and angles	Students will identify and draw angles, parallel and perpendicular lines and find angle measures.	Identify points, lines, rays and angles. Ch. 13 pp 592 – 622	
Week 6	4.M.5 4.GEO.1 4.GEO.2	Chapter 13: Identify and draw lines and angles	Students will draw, measure and find unknown angle measures.	Identify angles and find unknown angle measures. Ch 13 pp 623 - 643	
Week 7	4.M.5	Identify Symmetry and two-dimensional shapes	Students will classify triangles by sides, classify triangles by angles and classify quadrilaterals.	Classification of triangles and quadrilaterals. Ch. 14 pp 661 - 678	
Week 8		Revision Week			
Week 9		Final Examination			