

Fifth Grade Saxon Math

Box 1: Class Description

This year-long course covers the fifth grade math content noted below. Weekly certificated contact will be completed through direct personal contact with an HQ/certificated teacher in an on-site HC class. At least one state standard will be covered in this course.

Box 2: Learning Materials

The curriculum, books, supplies, materials, web-sites, and other sources used for this course are the Saxon, Grade 5 Math Program.

(Make additions as you see fit.)

Box 3: Learning Goals/Performance Objectives

The schedule of month-by month learning goals below, will likely not be exactly adhered to by the student. The schedule is approximate. Monthly coverage of these goals will vary according to the student's strengths and interests. The clear goal, however, is coverage of all of the goals below, by the end of the school year.

Fifth Grade Saxon Math

SEPTEMBER: Section 1: Lessons 1-10, Concepts A, Investigation 1 Sequences, Number Lines, Addition & Subtraction, Comparing, Multiplication & Division, Order of Operations, Evaluating Expressions, Solutions, Reading Scales, Elapsed Time, Fractions

Section 2: Lessons 11-20 Investigation 2 Comparing Numbers, Multiplying 1-digit, Equal Groups, Division, Halves, Factors, Multiplying by 10 & 100, Pictures of Fractions, Decimals & Percents, Lines & Angles, Fractions

OCTOBER: Section 3: Lessons 21-30, Concepts B & C, Investigation 3 Polygons, Rounding, Zeroes in Quotient, Triangles, Fractions on a Number Line, Fractions as Division, Fraction Pictures, Division Algorithm, Quotients with Mixed Numbers, Add & Subtract Fractions, Divisibility, Mixed Numbers, Measuring & Drawing Angles.

Section 4: Lessons 31-40, Concepts D & E, Investigation 4 Sum of Angles, Adding Fractions, Quadrilaterals, Constructing Rectangles, Fraction of a Group, Mixed Measures, Expanded Notation, Multi-Step Problems, Average, Multiplying 2-Digit, Distributive Property

NOVEMBER: Section 5: Lessons 41-50, Investigation 5 Numbers to Hundred Billions, Dividing Multiples of 10, Multiplying 3-Digits, Probability Experiments, Fractions Equal to 1, Quotients with Mixed Numbers, Fractions and Wholes, Line Graphs, Estimating, Organizing & Analyzing Data, Graphing

Section 6: Lessons 51-60, Investigation 6 Subtract Fractions from Whole Numbers, Money & Decimals, Tenths & Hundredths, Fractions & Decimals on Number Line, Naming Decimals, Comparing Decimals, Equivalent Decimals, Fractions, Decimals & Percents, Area of Rectangle, Add & Subtract Decimals, Coordinate Plane

DECEMBER: Section 7: Lessons 61-70, Concepts F Comparing Improper Fractions & Mixed Numbers, Prime & Composite Numbers, Prime Factorization, Exponents & Square Roots, Order of Operations, Equivalent Fractions, Fractions, Decimals & Percents

JANUARY: Decimals - Subtopics: Placement of decimal point, Visual representations of multiplying and dividing decimals (pictures, area model and number line), Conceptual understanding of multiplication and division of decimals, Explanation of effective strategies, multiplying decimals by decimals, dividing decimals by whole numbers Big Idea: Real world situations can be solved by combining or separating groups. Essential Questions: What patterns do you notice in the placement of the decimal when multiplying or dividing by the powers of ten? How is repeated addition related to multiplication and how is repeated subtraction related to division? How can visual models show multiplication and/or division of decimals? Compare and explain how the size of factors is related to the size of products. How can you apply the conversion of measurement units to real-life problems?

FEBRUARY: Fractions - Subtopics: Visual representations of multiplying and dividing fractions (pictures, area model and number line), Conceptual understanding of multiplication and division of fractions, Procedures for multiplying fractions by fractions, Procedures for dividing fractions by whole numbers. Big Idea = Real world situations can be solved by combining or separating groups. Essential Questions: How are fractions related to division? How can the area of a rectangle with fractional sides be represented? How can a visual model help to show multiplication of a fraction by a whole number? How does multiplying by a fraction or by a mixed number affect the size of the product? How can multiplication and division of fractions and mixed numbers be used in real life situations?

MARCH: Section 8: Lessons 71-80, Investigation 8, Concepts G Percents, Decimals & Fractions, Greatest Common Factor, Parallelograms, Area of a Triangle, Patterns & Functions, 2-Step Equations Section 9 Lessons 81-90, Focus on Concepts H & I Simplify Improper Fractions, Divide 2-Digit Numbers, Graphs, Estimating Quotients, Reciprocals, Divide by Zero, Compare Data, Integers, Add & Subtract Decimals Section 10: Lessons 91-100, Focus on Concepts J & K, Investigation 10 Division Algorithm, Subtract Decimals with Zero, Integers, Write Expressions, Percent as Part of a Group, Cubes

APRIL: Section 11: Lessons 101-110, Investigation 11 2-D Pictures of 3-D Figures, Percent of a Number, Least Common Multiple, Mixed Numbers as Improper Fractions, Use Formulas, Complex Figures, Common and Least Denominators Section 12: Lessons 111-114, Focus on Concepts L Add & Subtract Mixed Numbers, Solve Equations with Unknown Factors

MAY: Common Core Unit – Volume; Subtopics: Understand that a unit cube can measure volume, Conceptual understanding of volume, Pack rectangular solids with cubes to find volume, Apply the formula for volume. Big Idea = Real world situations can be solved by combining or separating groups. Essential Questions: How are fractions related to division? How can the area of a rectangle with fractional sides be represented? How can a visual model help to show multiplication of a fraction by a whole number? How does multiplying by a fraction or by a mixed number affect the size of the product? How can multiplication of fractions and mixed

numbers be used in real life situations? How can division of fractions and whole numbers be used in real life situations?

JUNE: Review lessons as needed. You may now teach lessons 61, 63, 64, 69, and Investigation 7; lessons 71, 73, 74, 77, 78, 79, and 80; lessons 81, 85, and 86; lessons 91, 93, 94, 98, 99 and 100; and lessons 101, 103, 105, 106, 109, 110 and 114.

Box 4: Learning Activities

Each day the student will complete a math lesson. They will have a new lesson/concept/learning explained, demonstrated/taught. They'll complete practice problems to ensure understanding of content. They will have independent practice/homework over those concepts. They will re-do and correct any which they missed. When review is needed, we'll not learn a new concept but take the time needed to re-teach or reinforce needed concepts.

(Make additions or deletions as you see fit.)

Box 5: Progress Criteria/ Methods of Evaluation

Student monthly progress evaluation is made on the basis of weekly certificated contact, work samples, communications with students, communications with parents, and performance in on-site classes. It is electronically communicated to parents via WINGS. It is our goal that the student will accomplish approximately 10% of the goals of this course each month, September through June. The level of mastery expected is 70% or higher to progress. Methods of evaluation will include but are not limited to those below, under the direction of an HQ teacher:

- * observation and/or correction of daily and/or weekly work and progress
- * daily or weekly discussion of assignments, readings, writings
- * correction of work done incorrectly
- * portfolio kept of student work, at least weekly

(Make additions or deletions as you see fit, to asterisks.)

Box 6: Weekly Hours

Please estimate the number of hours your student will work on this course.