Wells Junior High School Course Summary Template

Name of Course: Grade 5 Math

Course Overview:		
Summary: This course studies the foundation of middle level mathematics. Students build off of their foundational knowledge of the operations, and apply them to whole numbers, decimals, fractions, and shapes. Students also begin work with functions by learning to graph on a coordinate plane, as well as geometry by learning the attributes of quadrilaterals and triangles.		
Unit of Study	**Essential Question(s)**	**Content/Skill/Concept**
Grade 4 Module 6 Decimal Fractions *Lessons 1-10	• How can we use our knowledge of the place value system to compare decimals and fractions? • How can we express decimals as fractions? • What different ways can we write a decimal? • How can we decompose ones, tenths, and hundredths?	• Write fractions as decimals • Write decimals as fractions • Express decimals and fractions in expanded form, unit form, standard form and word form • Compare decimals using < , > , or = • Rewrite a fraction with a denominator of 10 with a denominator of 100 and show equivalence
Grade 5 Module 1 Place Value and Decimal Fractions	• How can we explain the shift in digits when multiplying or dividing by a power of ten? • In what ways can I model a digit's value changing? • What patterns can be identified when multiplying or dividing by the powers of ten? • What is a strategy to use to multiply, divide, add, or subtract decimals?	• Write whole numbers and decimals in fraction, standard, and unit forms • Compare decimals using <,>, or = • Use the place value chart and words to explain the value of a digit • Use the place value chart to multiply or divide by a power of ten • Explain the shift in digits when multiplying or dividing using the place value chart • Round Decimals to the nearest tenth • Order decimals from least to greatest • Write decimals in expanded notation and word notation • Add, subtract, multiply, and divide decimals

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Grade 5 Module 2 Multi Digit Whole Number and Decimal Fraction Operations	• What do the symbols (parentheses, brackets, braces) represent when evaluating an expression? • How does a digit's position affect its value? • Why is the standard algorithm an efficient method for multiplication? • What is an efficient strategy for dividing numbers? • What is an efficient strategy for adding, subtracting, multiplying and dividing decimals?	• Students can divide and multiply using a power of ten • Students can divide with remainders • Students can generate a division problem when given the quotient and remainderStudents can solve a problem using decimal division • Students can solve a word problem with area • Students can solve multi step word problems using addition, subtraction multiplication, and division • Students can solve multi step word problems using multiple operations • Students can write numerical expressions from word form and solve them • Students can compare numerical expression in word form, standard form, and unit form • Students can multiply two digit numbers and explain how they relate to multiply decimals with the same digits • Students can multiply multi digit whole numbers and decimals • Students can solve multi step multiplication word problems • Students can solve multi step multiplication and addition word problems • Students can use multiplication and division to convert from on unit of measure to another
Grade 4 Module 5 Equivalent Fractions *Lessons 1-11	• How can decomposing and composing a unit and non unit fraction represent fraction equivalence?	• Numerator • Denominator • Mixed Number • Unit and non unit fraction

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	• How can an area model and multiplication/division be used to show fraction equivalence?	• Equivalent fractions • Decomposing unit and non unit fractions • Decomposing unit fractions to show equivalence • Whole fraction • Compose and decompose fractions • Using multiplication and division to show fraction equivalence
Grade 5 Module 3 Addition and Subtraction of Fractions	• How can an area model, number line, and math operations be used to create equivalent fractions? • What strategies can be used to add fractions with unlike denominators? • What strategies can be used to subtract fractions with unlike denominators?	• Students can use a number line to create equivalent fractions • Students can use an area model to create equivalent fraction • Add fractions with unlike denominators using any method • Subtract fractions with unlike denominators with any method • Add and subtract fractions by finding a common denominator using the area model and multiplication to find a common multiple • Identify the least common multiple • Simplify fractions to their lowest terms
Grade 5 Module 4 Multiplication and Division of Fractions and Decimal Fractions	• How can fractions be used to show division? • How can we use numerical expressions to evaluate equations? • What strategies can be used to multiply, divide, add, and subtract fractions? • What strategies can be used to multiply, divide, add, and subtract fractions and	• Students can use parentheses in numerical expressions and evaluate these expressions. • Students can write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them • Students can add, subtract, multiply, and divide fractions using properties of operation, a concrete model, or drawing

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	mixed numbers?	and explain my reasoning ● Students can interpret a fraction as division of the numerator by the denominator. ● Students can solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers using equations to represent the problem ● Students can multiply a fraction by a whole number ● Students can convert among different sized standard measurements. ● Students can solve real world problems involving multiplication of fractions and mixed numbers. ● Students can divide fractions by fractions and fractions by whole numbers.
Grade 5 Module 5 Addition and Multiplication with Volume and Area *Only to mid module assessment	● How do we represent the inside of a 3 dimensional figure? ● What are the properties of 2 dimensional figures? ● How do we find the area of shape with fractional length sides? ● How do we multiply a fraction by a whole number or another fraction?	● Students can multiply a fraction or whole number by a fraction. ● Students can find the area of a rectangle with fractional side lengths using unit squares of the appropriate unit fraction side lengths, show that the area is the same as would be found by multiplying the side lengths.

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		• Students can multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas • Students can understand that attributes belonging to a category of two- dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles • Students can recognize volume as additive and find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts • Students can solve volume problems using a mathematical formula (addition and multiplication), and unit cubes
Grade 5 Module 6 Problem Solving with the Coordinate Plane	• What is the relationship between points, ordered pairs, patterns, and lines in a coordinate plane? • What is the x and y axis and how do I use it to identify x and y coordinates? • Can I use the coordinate plane to solve problems? • What are the real world applications of the coordinate plane?	• Students can identify x and y coordinates • Students can place a coordinate point on a graph • Students can identify coordinate points on a graph • Students can classify two dimensional shapes based on their properties. • Students can use multiplication to find the volume of a rectangular prism and two non-overlapping right rectangular prisms

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		• Students can use centimeter cubes to find the volume. • Students can create 3 dimensional shapes given a specific volume. • Students can solve multi-step word problems