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| **5th Grade Learning Targets** |
| **Operations & Algebraic Thinking** |
| ***Cluster: Write and Interpret Numerical Expressions*** |
| **5.OA.1** Use Parentheses, brackets, or braces in numerical expressions |
| **5.OA.2** Write simple expressions and interpret numerical expressions |
| ***Cluster: Analyze Patterns and Relationships*** |
| **5.OA.3** Generate numerical patterns using two given rules, form and graph ordered pairs |
| **Numbers and Operations in Base Ten** |
| ***Cluster: Understand the Place Value System*** |
| **5.NBT.1** Recognize Value of Digits as 10x the Value of the Digit to its Right and 1/10 to its left |
| **5.NBT.2** Explain patterns in the number of zeros when multiplying a number by powers of 10 |
| **5.NBT.3** Read, write, and compare decimals to thousandths |
| 1. Read and write decimals using base-ten numerals, names, and expanded form |
| 1. Compare two decimals using symbols |
| **5.NBT.4** Use place value understanding to round decimals to any place |
| ***Cluster: Perform Operations with Multi-digit Whole Numbers & Decimals to Hundredths*** |
| **5.NBT.5** Fluently multiply multi-digit whole numbers using the standard algorithm |
| **5.NBT.6** Find whole number quotients with up to four-digit dividends and two-digit divisors using equations, arrays, and/or area models |
| **5.NBT.7** Add, subtract, multiply, and divide decimals to hundredths using strategies based on place value, properties of operations, and/or relationships between addition and  subtraction; relate the strategy to a written method and explain the reasoning used |
| **Numbers and Operations - Fractions** |
| ***Cluster: Use Equivalent Fractions as a Strategy to Add and Subtract Fractions*** |
| **5.NF.1** Add and subtract fractions with unlike denominators |
| **5.NF.2** Solve word problems involving addition and subtraction of fractions using visual fraction models or equations and use fraction number sense to estimate mentally and assess reasonableness of answers |
| ***Cluster: Apply and Extend Previous Understandings of Multiplication and Division to Fractions*** |
| **5.NF.3** Interpret a fraction as division of the numerator by the denominator and solve word problems involving division of whole numbers leading to answers in the form of fractions |
| **5.NF.4** Multiply a Fraction or a Whole Number by a Fraction |
| 1. Use a visual fraction model to show e.g. (2/3) x 4 = 8/3 and create a story context for the equation |
| 1. Find area of rectangles by tiling with unit squares and multiply fractional side lengths to find areas of rectangles and represent fraction products as rectangular areas to show the area is the same |
| **5.NF.5** Interpret multiplication as scaling (resizing) by: |
| 1. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication |
| 1. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number and multiplying by a fraction less than 1 results in a product smaller than the given number |
| **5.NF.6** Solve real-world problems involving multiplication of fractions and mixed numbers |
| **5.NF.7** Divide unit fractions by whole numbers and whole numbers by unit fractions |
| 1. Interpret and compute division of a unit fraction by a whole number- create a story context and use a visual model to show the quotient, use the relationship between multiplication and division to explain equations |
| 1. Interpret and compute division of a whole number by a unit fraction - create a story context and use a visual model to show the quotient, use the relationship between multiplication and division to explain equations |
| 1. Solve real-world problems involving division with unit fractions by using visual models and equations to represent the problem |
| **Measurement & Data** |
| ***Cluster: Convert Like Measurement Units within a Given Measurement System*** |
| **5.MD.1** Convert among different-sized standard measurement units within a given measurement system and use these conversions in solving multi-step, real-world problems |
| ***Cluster: Represent and Interpret Data*** |
| **5.MD.2** Make a Line Plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8) and use operations on fractions to solve problems involving the data |
| ***Cluster: Geometric Measurement : Concepts of Volume Related to Multiplication and Addition*** |
| **5.MD.3** Recognize volume as an attribute of solid figures and understand concepts of volume measurement |
| 1. A cube with the side length 1 unit , called a “unit cube” has “one cubic unit” of volume   and can be used to measure volume |
| 1. A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units |
| **5.MD.4** Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units |
| **5.MD.5** Relate volume to the operations of multiplication and addition and solve real world problems involving volume |
| 1. Find the volume of a right rectangular prism using unit cubes, multiplying edge lengths, and by multiplying the height by the area of the base |
| 1. Apply the formulas V = l x w x h and V=b x h in the context of real-world problems to find the area of right rectangular prisms |
| 1. Recognize volume is additive – Find volumes of solid figures composed of two non-overlapping rectangular prisms by adding the volumes of the non-overlapping parts to solve real-world problems |
| **Geometry** |
| ***Cluster: Graph Points on the Coordinate Place to Solve Real-World and Mathematical Problems*** |
| **5.G.1** Understand and Define a coordinate system using x and y axes and x and y coordinates |
| **5.G.2** Represent real-world and mathematical problems by graphing and interpreting coordinate values of points in the context of the situation |
| ***Cluster: Classify Two-Dimensional Figures into Categories Based on their Properties*** |
| **5.G.3** Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category |
| **5.G.4** Classify two-dimensional figures in a hierarchy based on properties |