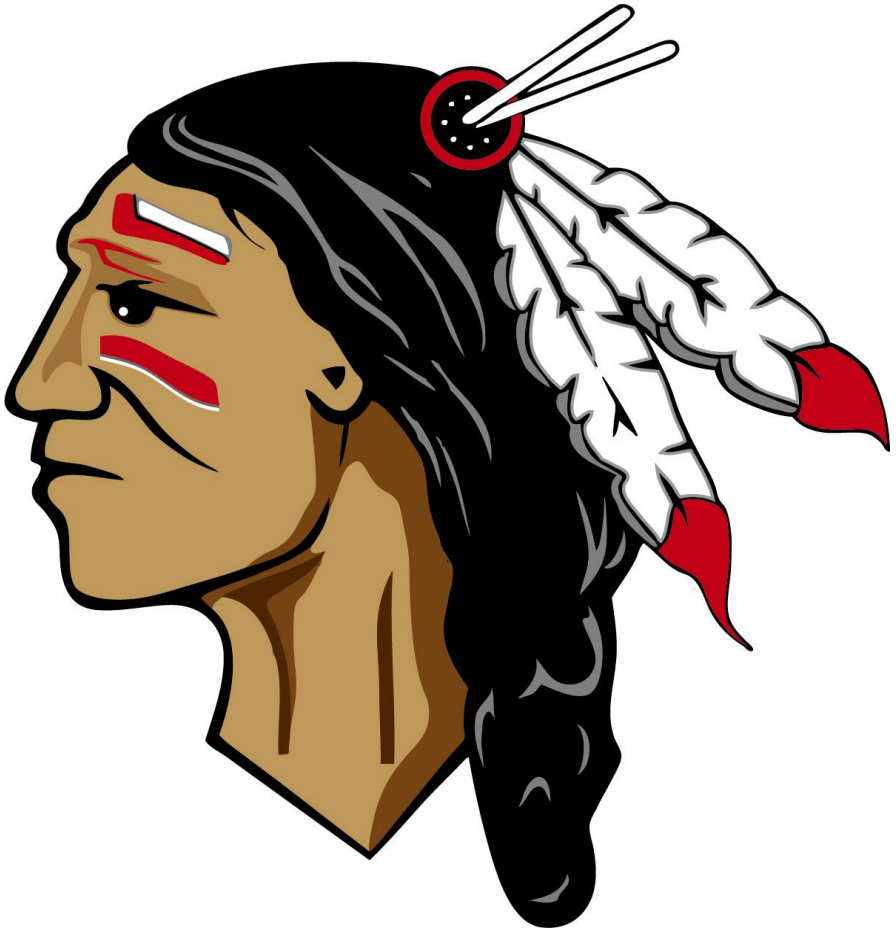
Westside Middle School
5th Grade Math Curriculum Map
2017-2018

Teacher: Jones & Wann **Revised:** 7.19.17



Map is still under construction and will be revised throughout the year.

WESTSIDE MIDDLE SCHOOL 5TH GRADE MATH CURRICULUM MAP

Teacher: Jones & Wann

Quarter 1

Numbers and Operations in Base Ten

Focus is on understanding the coherence of place-value for whole numbers and decimals, and how operations with whole numbers translate to decimals.

AR STANDARDS / SKILLS

CONTENT VOCABULARY WITHIN THE STANDARD WILL BE TAUGHT THROUGHOUT DAILY OBJECTIVES / GOALS.

The student will…. Standard Coding: Numbers and Operations in Base Ten

5.NBT.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left

5.NBT 2 Understand why multiplying or dividing by a power of 10 shifts the value of the digits of a whole number or decimal:

· Explain patterns in the number of zeros of the product when multiplying a whole number by powers of 10

· Explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10

· Use whole-number exponents to denote powers of 10

5.NBT.3 Read, write, and compare decimals to thousandths:

· Read and write decimals to thousandths using base-ten numerals, number names, and expanded form(s)

o Number name form (three-hundred forty seven and three hundred ninety-two thousandths)

o Expanded form(s): 300 + 40 + 7 + .3 + .09 +.002 = 300 +40 +7 +3/10 + 9/100 + 2/100 = 3 x 100 + 4 x 10 + 7 x 1 + 3 x (1/10) + 9 x (1/100) +2 x (1/1000)= 3 x 102 + 4 x 101 x 7 x 100 + 3x (1/101) + 9x (1/102) +2 x (1/103) ·

Compare two decimals to thousandths based on the value of the digits in each place, using >, =, and < symbols to record the results of comparisons

5.NBT.4 Apply place value understanding to round decimals to any place

Activities/Skills	Assessments	Resources	Vocabulary/Terms
• Modeling-Drawing & Manipulatives • Graphic Organizer-Word Form, Expanded Form, Standard Form • Foldable Activities • Base Ten to Represent Place Value • Place Value Cups • Flashcards • Center Activities/Stations • Folder Games	• Springdale Activities • Unit Tests • Exit slips • Kahoot • Common Assessments • Ten Marks • STAR Math	• Interactive Notebooks • TpT • EnVision Textbooks • Graphic Organizers • Chromebooks • Manipulatives • Youtube Math Videos	• Standard Form • Word Form • Expanded Form • Decimal • Powers of Ten • Base • Exponent • Cubed • Squared • Rounding • Comparing • Greater Than • Less Than • Equal To • And (Decimal) • Tenths • Hundredths • Thousandths • Product • Place Value • Value • Factors • Whole Numbers

Quarter 2

Numbers and Operations in Base Ten
Focus is on understanding the coherence of place-value for whole numbers and decimals, and how operations with whole numbers translate to decimals.
Operations and Algebraic Thinking
Focus is on numerical expressions. Students compare patterns, developing early function reasoning.
Geometry
Focus is on categories of 2-dimensional figures based on properties. The coordinate plane is introduced.

AR STANDARDS / SKILLS

CONTENT VOCABULARY WITHIN THE STANDARD WILL BE TAUGHT THROUGHOUT DAILY OBJECTIVES / GOALS.

The student will…. Standard Coding: Numbers and Operations in Base Ten Operations and Algebraic Thinking Geometry

5.NBT.5 Fluently (efficiently, accurately and with some degree of flexibility) multiply multi-digit whole numbers using a standard algorithm.
5.NBT.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on:
o Place value
o The properties of operations
o Divisibility rules; and
o The relationship between multiplication and division · Illustrate and explain calculations by using equations, rectangular arrays, and area models
5.NBT.7 Perform basic operations on decimals to the hundredths place: · Add and subtract decimals to hundredths using concrete models or drawings and strategies based on place value, properties of operations, and the relationship between addition and subtraction · Multiply and divide decimals to hundredths using concrete models or drawings and strategies based on place value, properties of operations, and the relationship between multiplication and division.
5.OA.1 Use grouping symbols including parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.
5.OA.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.
5.OA.3
· Generate two numerical patterns, each using a given rule
· Identify apparent relationships between corresponding terms by completing a function table or input/output table
· Using the terms created, form and graph ordered pairs in the first quadrant of the coordinate plane
5.G.1
· Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates
· Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x- coordinate, y-axis and y-coordinate)
5.G.2
·Represent real world and mathematical problems by graphing points in the first quadrant and on the non-negative x- and y-axes of the coordinate plane
· Interpret coordinate values of points in the context of the situation

Activities/Skills	Assessments	Resources	Vocabulary/Terms
• Folder Games • Modeling-Drawing & Manipulatives With Hundredths Grids • Center Activities/Stations • Concept Cards • Battleship Quadrant 1 • Pictographs • Math Scoot/Footloose • Real World Word Problems/Sharing	• Springdale Activities • Unit Tests • Exit slips • Kahoot • Common Assessments • Ten Marks • STAR Math	• Interactive Notebooks • TpT • EnVision Textbooks • Graphic Organizers • Chromebooks • Manipulatives	• Quotients • Dividend • Divisor • Divisibility Rules • Associative Property • Commutative Property • Distributive Property • Identity Property • Zero Property • Algorithm • Traditional/Partial Product • Array • Multiples • Brackets • Braces • Parentheses • Order of Operations • Expressions • Equations • Numerical Pattern • Functional Tables/Rules • Ordered Pairs • Coordinate Plane • Axis • X-Axis • Y-Axis • Origin • Perpendicular Lines • Non Negative

Quarter 3

Numbers & Operations-Fractions

Focus is on deepening understanding of fraction multiplication and division, and on developing fluency with fraction addition and subtraction through equivalent fractions.

AR STANDARDS / SKILLS

CONTENT VOCABULARY WITHIN THE STANDARD WILL BE TAUGHT THROUGHOUT DAILY OBJECTIVES / GOALS.

The student will…. Standard Coding: Numbers and Operations-Fractions

5.NF.1 Efficiently, accurately, and with some degree of flexibility, add and subtract fractions with unlike denominators (including mixed numbers) using equivalent fractions and common denominators.
5.NF.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators.
5.NF.3
· Interpret a fraction as division of the numerator by the denominator (a/b = a ÷ b), where a and b are natural numbers.
· Solve word problems involving division of natural numbers leading to answers in the form of fractions or mixed numbers.
5.NF.4
·Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction: · Interpret the product (a/b) × q as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations a × q ÷ b
· Find the area of a rectangle with fractional (less than and/or greater than 1) side lengths, by tiling it with unit squares of the appropriate unit fraction side lengths, by multiplying the fractional side lengths, and then show that both procedures yield the same area
5.NF.5 Interpret multiplication as scaling (resizing), by: · 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
5.NF.6 Solve real world problems involving multiplication of fractions and mixed numbers
5.NF.7 Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions:
· Interpret division of a unit fraction by a natural number, and compute such quotients
· Interpret division of a whole number by a unit fraction, and compute such quotients
· Solve real world problems involving division of unit fractions by natural numbers and division of whole numbers by unit fractions

Activities/Skills	Assessments	Resources	Vocabulary/Terms
• Folder Games • Modeling-Drawing & Manipulatives • Center Activities/Stations • Concept Cards • Pictographs • Math Scoot/Footloose • Real World Word Problems/Sharing	• Springdale Activities • Unit Tests • Exit slips • Kahoot • Common Assessments • Ten Marks • STAR Math	• Interactive Notebooks • TpT • EnVision Textbooks • Graphic Organizers • Chromebooks • Manipulatives	• Divisibility • Factors • Greatest Common Factor • Least Common Multiple • Equivalent • Mixed Number • Improper Fraction • Fraction • Simplest Form • Unlike Denominator • Numerator • Denominator • Natural Numbers (Whole Numbers) • Reciprocal • Area (A=l x w) • Scaling • Unit Fraction (Fraction with a numerator of 1)

Quarter 4

Geometry
Focus is on categories of 2-dimensional figures based on properties. The coordinate plane is introduced.

Measurement and Data
Focus is on the concept of volume and relations to multiplication and addition. Students convert measurements to different units and continue to represent and interpret data.

AR STANDARDS / SKILLS

CONTENT VOCABULARY WITHIN THE STANDARD WILL BE TAUGHT THROUGHOUT DAILY OBJECTIVES / GOALS.

The student will…. Standard Coding: Geometry Measurement and Data

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.
5.MD.1
· Convert among different-sized standard measurement units within the metric system
· Convert among different-sized standard measurement units within the customary system
· Use these conversions in solving multi-step, real world problems
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)
· Use operations on fractions for this grade to solve problems involving information presented in line plots
5.MD.3 Recognize volume as an attribute of solid figures and understand concepts of volume measurement:
· A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume
· 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 and mathematical problems involving volume:
· Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base (B)
· Represent threefold whole-number products as volumes (e.g., to represent the associative property of multiplication)
· Apply the formulas V = l × w × h and V = B × h for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems
· Recognize volume as additive
· Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems

Activities/Skills	Assessments	Resources	Vocabulary/Terms
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