

# HUDSONVILLE PUBLIC SCHOOLS ELEMENTARY COURSE FRAMEWORK



**COURSE/SUBJECT**

**Fifth Grade Math**

<b>UNIT PACING</b> Names of units and approximate pacing	<b>LEARNING TARGETS</b> Students will be able to...	<b>STANDARD</b> Which Common Core standards does this address?	<b>ASSESSMENTS</b> Which assessments are given to determine student growth?
Math Expression Common Core  Unit 1: Addition and Subtraction with Fractions  <i>September/October</i>	<ul style="list-style-type: none"> <li>• I can add fractions and mixed numbers with unlike denominators by finding common denominators.</li> <li>• I can subtract fractions and mixed numbers with unlike denominators by finding common denominators.</li> <li>• I can add and subtract fractions and mixed numbers with unlike denominators to solve word problems.</li> <li>• I can tell if my answer is reasonable by using mental math and estimation.</li> </ul>	5.NF.1 5.NF.2 5.MD.2	Unit 1 Quick Quizzes  Unit 1 Assessment
Math Expression Common Core  Unit 2: Addition and Subtraction with Decimals  <i>October/November</i>	<ul style="list-style-type: none"> <li>• I can see that in a multi-digit number, a digit in one place is ten times what it represented in the place to its right.</li> <li>• I can see that in a multi-digit number, a digit in one place is 1/10 of what it would be in the place to its left.</li> <li>• I can read and write decimals to thousandths in digits.</li> <li>• I can read and write decimals to thousandths in words.</li> <li>• I can read and write decimals to thousandths in expanded form.</li> <li>• I can compare two decimals to thousandths using <math>&lt;</math>, <math>&gt;</math>, <math>=</math>.</li> <li>• I can round decimals to any place.</li> <li>• I can add, subtract, multiply, and divide decimals to the hundredths, using hands-on math tools, drawings, place value strategies, properties of operations, and the relationship between addition and subtraction.</li> <li>• I can connect the strategy I used to a written method and explain why I did what I did.</li> </ul>	5.NBT.1 5.NBT.3a 5.NBT.3b 5.NBT.4 5.NBT.7	Unit 2 Quick Quizzes  Unit 2 Assessment

<p>Math Expression Common Core</p> <p>Unit 3: Multiplication and Division with Fractions</p> <p><i>November/December</i></p>	<ul style="list-style-type: none"> <li>• I can add and subtract fractions and mixed numbers with unlike denominators by finding common denominators.</li> <li>• I can add and subtract fractions and mixed numbers with unlike denominators to solve word problems.</li> <li>• I can tell if my answer is reasonable by using mental math and estimation.</li> <li>• I can understand a fraction as a division problem.</li> <li>• I can solve division word problems, where the answer is a fraction or mixed number, by using visual fraction models or equations to help me solve the problem.</li> <li>• I can multiply a fraction by a whole number by drawing a picture of the whole number broken into the correct number of parts.</li> <li>• I can multiply a fraction by a fraction by drawing a picture.</li> <li>• I can multiply a fraction by a whole number by multiplying the numerator by the whole number and dividing by the denominator.</li> <li>• I can multiply a fraction by a fraction by multiplying the numerators together and multiplying the denominators together.</li> <li>• I can write a word problem to match a fraction multiplication problem.</li> <li>• I can multiply the sides of a rectangle to find the area when the side lengths are fractions.</li> <li>• I can show fraction products as rectangular areas.</li> <li>• I can explain why multiplying a number by a fraction greater than 1 gives me an answer greater than the number I started with.</li> <li>• I can explain why multiplying a number by a fraction less than 1 gives me an answer less than the number I started with.</li> <li>• I can understand that when I multiply a fraction by <math>n/n</math> to find an equivalent fraction it is the same as multiplying the fraction by 1.</li> <li>• I can solve real world multiplication problems with fractions and mixed numbers, using visual fraction models or equations.</li> <li>• I can divide a unit fraction by a whole number.</li> <li>• I can write a word problem to match a unit fraction divided by a whole number problem.</li> <li>• I can use a visual fraction model to show the answer to a problem where a unit fraction is divided by a whole number.</li> <li>• I can use the relationship between multiplication and division to explain <math>1/3</math> divided by <math>4 = 1/12</math> because <math>(1/12) \times 4 = 1/3</math>.</li> <li>• I can divide a whole number by a unit fraction.</li> <li>• I can write a word problem to match a whole number divided by a unit fraction problem.</li> <li>• I can use a visual fraction model to show the answer to problem where a whole number is divided by a unit fraction.</li> <li>• I can use the relationship between multiplication and division to explain <math>4</math> divided by <math>1/5 = 20</math> because <math>20 \times (1/5) = 4</math>.</li> <li>• I can solve real world problems involving division of unit fractions by whole numbers by using visual fraction models and equations.</li> <li>• I can solve real world problems involving division of whole numbers by unit fractions by using visual fraction models and equations.</li> </ul>	<p>5.NF.1 5.NF.2 5.NF.3 5.NF.4a 5.NF.4b 5.NF.5a 5.NF.5b 5.NF.6 5.NF.7a 5.NF.7b 5.NF.7c 5.MD.2</p>	<p>Unit 3 Quick Quizzes</p> <p>Unit 3 Assessment</p>
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<p>Math Expression Common Core</p> <p>Unit 4: Multiplication with Whole Numbers and Decimals</p> <p><i>January</i></p>	<ul style="list-style-type: none"> <li>• I can see that in a multi-digit number, a digit in one place is ten times what it represented in the place to its right.</li> <li>• I can see that in a multi-digit number, a digit in one place is 1/10 of what it would be in the place to its left.</li> <li>• I can explain patterns in the number of zeros in the answer when I multiply by a power of ten.</li> <li>• I can explain patterns in the placement of the decimal point when I multiply a decimal by a power of ten.</li> <li>• I can compare two decimals to thousandths using <math>&lt;</math>, <math>&gt;</math>, <math>=</math>.</li> <li>• I can round decimals to any place.</li> <li>• I can fluently multiply multi-digit numbers using the standard algorithm.</li> <li>• I can add, subtract, multiply, and divide decimals to the hundredths, using hands-on math tools, drawings, place value strategies, properties of operations, and the relationship between addition and subtraction.</li> <li>• I can connect the strategy I used to a written method and explain why I did what I did.</li> <li>• I can compare the size of a product to the size of one factor using the size of the other factor, without doing the multiplication problem.</li> </ul>	<p>5.NBT.1 5.NBT.2 5.NBT.3b 5.NBT.4 5.NBT.5 5.NBT.7 5.NF.5a 5.NF.5b</p>	<p>Unit 4 Quick Quizzes</p> <p>Unit 4 Assessment</p>
<p>Math Expression Common Core</p> <p>Unit 5: Division with Whole Numbers and Decimals</p> <p><i>February</i></p>	<ul style="list-style-type: none"> <li>• I can see that in a multi-digit number, a digit in one place is ten times what it represented in the place to its right.</li> <li>• I can see that in a multi-digit number, a digit in one place is 1/10 of what it would be in the place to its left.</li> <li>• I can explain patterns in the number of zeros in the answer when I multiply by a power of ten.</li> <li>• I can explain patterns in the placement of the decimal point when I multiply a decimal by a power of ten.</li> <li>• I can compare two decimals to thousandths using <math>&lt;</math>, <math>&gt;</math>, <math>=</math>.</li> <li>• I can divide [up to] a 4-digit number by [up to] a 2-digit number using place value strategies, properties of operations, and the relationship between multiplication and division.</li> <li>• I can draw and explain a division problem by using equations, rectangular arrays, and/or area models.</li> <li>• I can add, subtract, multiply, and divide decimals to the hundredths, using hands-on math tools, drawings, place value strategies, properties of operations, and the relationship between addition and subtraction.</li> <li>• I can connect the strategy I used to a written method and explain why I did what I did.</li> </ul>	<p>5.NBT.1 5.NBT.2 5.NBT.3b 5.NBT.6 5.NBT.7</p>	<p>Unit 5 Quick Quizzes</p> <p>Unit 5 Assessment</p>

<p>Math Expression Common Core</p> <p>Unit 6: Operations and Problem Solving</p> <p><i>March</i></p>	<ul style="list-style-type: none"> <li>• I can use parentheses, brackets, or braces in numerical expressions.</li> <li>• I can evaluate expressions with parentheses, brackets, or braces.</li> <li>• I can round decimals to any place.</li> <li>• I can fluently multiply multi-digit numbers using the standard algorithm.</li> <li>• I can divide [up to] a 4-digit number by [up to] a 2-digit number using place value strategies, properties of operations, and the relationship between multiplication and division.</li> <li>• I can draw and explain a division problem by using equations, rectangular arrays, and/or area models.</li> <li>• I can add, subtract, multiply, and divide decimals to the hundredths, using hands-on math tools, drawings, place value strategies, properties of operations, and the relationship between addition and subtraction.</li> <li>• I can connect the strategy I used to a written method and explain why I did what I did.</li> <li>• I can add and subtract fractions and mixed numbers with unlike denominators by finding common denominators.</li> <li>• I can add and subtract fractions and mixed numbers with unlike denominators to solve word problems.</li> <li>• I can tell if my answer is reasonable by using mental math and estimation.</li> <li>• I can multiply a fraction by a whole number and a fraction by a fraction by drawing a picture.</li> <li>• I can multiply a fraction by a fraction by multiplying the numerators together and multiplying the denominators together.</li> <li>• I can compare the size of a product to the size of one factor using the size of the other factor, without doing the multiplication problem.</li> <li>• I can solve real world multiplication problems with fractions and mixed numbers, using visual fraction models or equations.</li> <li>• I can apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.</li> </ul>	<p>5.OA.1 5.NBT.4 5.NBT.5 5.NBT.6 5.NBT.7 5.NF.1 5.NF.2 5.NF.4a 5.NF.4b 5.NF.5a 5.NF.5b 5.NF.6 5.NF.7 5.NF.7a 5.NF.7b 5.NF.7c</p>	<p>Unit 6 Quick Quizzes</p> <p>Unit 6 Assessment</p>
<p>Math Expression Common Core</p> <p>Unit 7: Algebra, Patterns, and Coordinate Graphs</p> <p><i>April</i></p>	<ul style="list-style-type: none"> <li>• I can use parentheses, brackets, or braces in numerical expressions.</li> <li>• I can evaluate expressions with parentheses, brackets, or braces.</li> <li>• I can write and interpret simple expressions without finding the answer. For example, write “add 8 and 7, then multiply by 2” as <math>2 \times (8 + 7)</math>.</li> <li>• I can see that <math>3 \times (18,932 + 921)</math> is three times as large as <math>18,932 + 921</math>.</li> <li>• I can produce numerical patterns using two given rules.</li> <li>• I can find relationships between corresponding terms.</li> <li>• I can form ordered pairs from the two patterns.</li> <li>• I can graph ordered pairs on a coordinate plane.</li> <li>• I can use a coordinate grid with a vertical x-axis and a horizontal y-axis to find ordered pairs (x, y).</li> <li>• I can understand that the first number in an ordered pair is the x-coordinate and tells me how far vertically from the y-axis the point is located.</li> <li>• I can understand that the second number in an ordered pair is the y-coordinate and tells me how far horizontally from the x-axis the point is located.</li> <li>• I can graph points in the first quadrant of the coordinate plane (both coordinates are positive), in real world and math problems.</li> <li>• I can find and name points on the coordinate grid.</li> </ul>	<p>5.OA.1 5.OA.2 5.OA.3 5.G.1 5.G.2</p>	<p>Unit 7 Quick Quizzes</p> <p>Unit 7 Assessment</p>

<p>Math Expression Common Core</p> <p>Unit 8: Measurement and Data</p> <p><i>May/June</i></p>	<ul style="list-style-type: none"> <li>• I can find the area of a rectangle with fractional side lengths by tiling it with unit squares.</li> <li>• I can show that the area of the rectangle is the same as multiplying the side lengths.</li> <li>• I can multiply the sides of a rectangle to find the area when the side lengths are fractions.</li> <li>• I can show fraction products as rectangular areas.</li> <li>• I can convert measurements within the metric system and within the customary system.</li> <li>• I can use conversions to solve multi-step, real word problems.</li> <li>• I can make a line plot to display measurements in fractions.</li> <li>• I can use what I know about fraction addition, subtraction, multiplication and division to solve problems using the data on a line plot.</li> <li>• I can understand that a cube with the side length 1 unit, “unit cube,” has 1 cubic unit of volume.</li> <li>• I can understand that a “unit cube” can be used to measure volume.</li> <li>• I can understand that when a solid figure is filled with 25 unit cubes, it has the volume of 25 cubic units.</li> <li>• I can measure volume by counting unit cubes (cubic cm, cubic in, cubic ft, and generic cubic units).</li> <li>• I can find the volume of a rectangular prism (with whole number side lengths) by packing it with unit cubes.</li> <li>• I can show that the volume is the same as it would be if I multiplied the three edge lengths.</li> <li>• I can show that the volume is the same as it would be if I multiplied height by the area of the base.</li> <li>• I can use the formulas <math>V = l \times w \times h</math> and <math>V = b \times h</math> to find the volume of a rectangular prism with whole number side lengths in real world and math problems.</li> </ul>	<p>5.NF.4b 5.MD.1 5.MD.2 5.MD.3a 5.MD.3b 5.MD.4 5.MD.5a 5.MD.5b</p>	<p>Unit 8 Quick Quizzes</p> <p>Unit 8 Assessment</p>
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