

**Grade 5**  
**Math Academic Standards – End of Year**  
**School District of Fort Atkinson**

<b>Conceptual Strand</b>	<b>Skills</b>
Estimation	<ul style="list-style-type: none"> <li>▪ Determines number of objects in a set by estimation, including rounding decimals to the nearest hundredth</li> <li>▪ Approximates measurements (weight, length &amp; volume) by using estimation techniques</li> <li>▪ Selects/uses estimation in problem solving situations</li> </ul>
Addition/Subtraction	<ul style="list-style-type: none"> <li>▪ Recalls the basic facts of addition and subtraction</li> <li>▪ Uses mental math</li> <li>▪ Selects and applies algorithms for addition and subtraction</li> <li>▪ Recognizes and uses the commutative and associative properties for addition in simple equations</li> <li>▪ Adds and subtracts decimals and money</li> <li>▪ Solves problems in vertical and horizontal formats</li> </ul>
Multiplication	<ul style="list-style-type: none"> <li>▪ Recalls the basic facts of multiplication (factors 0 through 12) orally &amp; in written work with minimal effort</li> <li>▪ Applies basic multiplication facts to multiple digit problems (2 digit x 2 digit)</li> <li>▪ Uses mental math</li> <li>▪ Selects and applies algorithms for multiplication</li> <li>▪ Uses a calculator correctly</li> <li>▪ Recognizes and uses generalized properties of multiplication</li> </ul>
Division	<ul style="list-style-type: none"> <li>▪ Recalls the basic facts of division (divisors to 12) orally and in written work with minimal effort</li> <li>▪ Applies basic division facts to multiple digit problems (2 digit x 2 digit and 3 digit ÷ 1 digit)</li> <li>▪ Uses mental math</li> <li>▪ Selects and applies algorithms for basic division</li> <li>▪ Uses a calculator correctly</li> <li>▪ Uses inverse relationship of multiplication and division to check work</li> </ul>
Algebra	<ul style="list-style-type: none"> <li>▪ Uses variables to stand for any unknown quantity</li> <li>▪ Uses the vocabulary &amp; symbols of algebra accurately</li> <li>▪ Recognizes how a change in one quantity can produce a change in another (balances equations)</li> <li>▪ Uses simple equations and inequalities (<math>&lt;</math>, <math>&gt;</math>) in a variety of ways including:               <ul style="list-style-type: none"> <li>✓ representing problem situations</li> <li>✓ solving using different methods</li> <li>✓ recording and describing solution strategies</li> </ul> </li> </ul>

Conceptual Strand	Skills
Place Value	<ul style="list-style-type: none"> <li>▪ Represents and explains               <ul style="list-style-type: none"> <li>✓ whole numbers through millions,</li> <li>✓ decimals through hundredths</li> <li>✓ fractions through sixteenths</li> </ul>               using place-value concepts and standard, written and expanded notation             </li> <li>▪ Recognizes and uses the concept of greater than, less than and equal to as well as their symbols (&gt;,&lt;=)</li> </ul>
Data Usage	<ul style="list-style-type: none"> <li>▪ Works with data in the context of real-life situations by:               <ul style="list-style-type: none"> <li>✓ formulating questions that lead to data collection and analysis</li> <li>✓ determining what data to collect, and when and how to collect it</li> <li>✓ collecting, organizing and displaying data</li> <li>✓ drawing reasonable conclusions based on data</li> </ul> </li> <li>▪ Describes a set of data using: range, mode and median</li> <li>▪ Reads, extracts and uses information presented in graphs, tables and charts</li> </ul>
Geometry	<ul style="list-style-type: none"> <li>▪ Demonstrates mastery of 2D and 3D figures through written work</li> <li>▪ Shows understanding of plane geometry including points, lines, line segments, rays and angles as well as the use of their symbols</li> <li>▪ Applies the concepts of symmetry, congruence and similarity when problem solving</li> <li>▪ Identifies and uses relationships among figures, such as location, position and intersection</li> </ul>
Fractions	<ul style="list-style-type: none"> <li>▪ Reads, writes and orders fractions through sixteenths</li> <li>▪ Identifies equivalent fractions through sixteenths</li> <li>▪ Adds and subtracts fractions with like and unlike denominators</li> <li>▪ Simplifies fractions on written work</li> </ul>
Time	<ul style="list-style-type: none"> <li>▪ Tells time to the minute</li> <li>▪ Accurately calculates elapsed time using a clock to the one-minute interval</li> <li>▪ Accurately calculates elapsed time using a calendar</li> </ul>
Money	<p>Student will accurately:</p> <ul style="list-style-type: none"> <li>▪ Combine and arrange all coin combinations</li> <li>▪ Order monetary units (decimals)</li> <li>▪ Make change using bills and coins in different ways beyond \$20.00 with a minimal amount of bills and coins</li> <li>▪ Orally “count back” changes correctly using all coins</li> </ul>
Measurement	<ul style="list-style-type: none"> <li>▪ Recognizes and describes the attributes of length, weight (mass), volume, angle size and chooses the correct unit to measure them</li> <li>▪ Reads and uses measuring instruments (ruler, scale and thermometer) to the nearest ounce, gram, degree and 1/16 of an inch</li> <li>▪ Finds perimeter and area</li> <li>▪ Uses standard measurement (metric &amp; US customary)</li> <li>▪ Uses and converts units including:               <ul style="list-style-type: none"> <li>✓ yards, feet &amp; inches (to quarter inch)</li> <li>✓ pounds and kilograms (to nearest ounce or gram)</li> <li>✓ gallons, quarts, pints &amp; cups</li> </ul> </li> </ul>

Conceptual Strand	Skills
Probability	<ul style="list-style-type: none"> <li>▪ Determines if future events are more, less or equally likely, impossible or certain to occur</li> <li>▪ Predicts outcomes of future events and tests predictions using data from a variety of sources</li> <li>▪ Expresses probability as a ratio</li> </ul>
Problem Solving	<ul style="list-style-type: none"> <li>▪ Uses reasoning abilities to: <ul style="list-style-type: none"> <li>✓ identify relationships</li> <li>✓ identify questions</li> <li>✓ choose &amp; justify strategies</li> <li>✓ check results</li> </ul> </li> <li>▪ Solves multiple step problems</li> <li>▪ Explains solutions clearly and logically (with supporting evidence) orally and in writing</li> </ul>
Accuracy	<ul style="list-style-type: none"> <li>▪ Work is completed with minimal errors and with care</li> <li>▪ Almost all work handed in on time</li> </ul>