

**Grade 4**  
**Math Academic Standards – End of Year**  
**School District of Fort Atkinson**

Conceptual Strand	Skills
Counting	<ul style="list-style-type: none"> <li>▪ Reads, writes, compares and orders whole numbers to millions</li> </ul>
Estimation	<ul style="list-style-type: none"> <li>▪ Determines number of objects in a set by estimation including rounding numbers to the nearest 1000</li> <li>▪ Approximates measurements (weight, length &amp; volume) by using estimation techniques</li> <li>▪ Selects and 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</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 and in written work</li> <li>▪ Uses mental math</li> <li>▪ Selects and applies algorithms for multiplication (2 digit X 1 digit and 3 digit X 1 digit)</li> <li>▪ Recognizes &amp; uses generalized properties of multiplication</li> <li>▪ Uses a calculator correctly</li> </ul>
Division	<ul style="list-style-type: none"> <li>▪ Recalls the basic facts of division (divisors to 9) orally and in written work</li> <li>▪ Uses mental math</li> <li>▪ Recalls the basic facts of division and applies them to multiple digit problems (2x1 digit)</li> <li>▪ Selects and applies algorithms for 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 letters, boxes or other symbols to stand for any number, measured quantity, or object in simple situations</li> <li>▪ Uses variables 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>&gt;</math>, <math>&lt;</math>) to:               <ul style="list-style-type: none"> <li>✓ represent problem situations</li> <li>✓ solve problems using different methods</li> <li>✓ record and describe solution strategies</li> </ul> </li> </ul>
Place Value	<ul style="list-style-type: none"> <li>▪ Represents and explains whole numbers through millions and decimals (monetary units) using place-value concepts:               <ul style="list-style-type: none"> <li>✓ physical materials</li> <li>✓ number lines</li> <li>✓ verbal descriptions</li> <li>✓ symbolic renaming (e.g. <math>43=40+3=30+13</math>)</li> </ul> </li> <li>▪ Recognizes and uses the concept of greater than, less than and equal to as well as their symbols (<math>&gt;</math>, <math>&lt;</math>, <math>=</math>)</li> </ul>

Conceptual Strand	Skills
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:               <ul style="list-style-type: none"> <li>✓ high &amp; low values (range)</li> <li>✓ most frequent value (mode)</li> <li>✓ middle value of a set (median)</li> </ul> </li> <li>▪ Reads, extracts and uses information presented in graphs, tables and charts</li> </ul>
Geometry	<ul style="list-style-type: none"> <li>▪ Describes 2 &amp; 3-D figures by:               <ul style="list-style-type: none"> <li>✓ naming them</li> <li>✓ comparing, sorting, classifying and combining them</li> <li>✓ drawing/constructing models</li> <li>✓ identifying properties (vertices, edges, faces, right angles)</li> <li>✓ explaining how figures are related to objects in the environment</li> </ul> </li> <li>▪ Recognizes symmetry, congruence and similarity</li> <li>▪ Identifies and demonstrates flips, turns, and slides</li> </ul>
Fractions	<ul style="list-style-type: none"> <li>▪ Reads and writes fractions (halves, fourths, &amp; tenths)</li> <li>▪ Identifies and represents equivalent fractions for halves, fourths, eighths, tenths and sixteenths</li> <li>▪ Adds and subtracts fractions with like denominators</li> <li>▪ Uses mixed numbers</li> <li>▪ Renames improper fractions to mixed numbers</li> </ul>
Time	<ul style="list-style-type: none"> <li>▪ Reads and interprets a clock</li> <li>▪ Knows and uses correct vocabulary dealing with time (appropriate units of measurement)</li> <li>▪ Accurately determines elapsed time using a calendar</li> <li>▪ Accurately determines elapsed time using a clock (5 minute interval)</li> <li>▪ Tells time to the minute</li> </ul>
Money	<ul style="list-style-type: none"> <li>▪ Recognizes and describes monetary value (Student determines the value of a given amount of coins and bills)</li> <li>▪ Orders monetary units (decimals)</li> <li>▪ Demonstrates several coin combinations for a given value</li> <li>▪ Makes change beyond \$20.00 (begins to understand concept of least amount of coins)</li> <li>▪ Begins to understand concept of “counting back” change verbally</li> </ul>
Measurement	<ul style="list-style-type: none"> <li>▪ Recognizes and describes the attributes of length, weight (mass), volume, and chooses the correct unit to measure them</li> <li>▪ Reads and uses measuring instruments (ruler to nearest 1/8 inch, thermometer, scale, etc.)</li> <li>▪ Finds perimeter</li> <li>▪ Finds area</li> <li>▪ Uses nonstandard &amp; 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 nearest half inch)</li> <li>✓ kilograms &amp; grams (to nearest ounce or gram)</li> <li>✓ gallons, quarts, pints &amp; cups</li> </ul> </li> </ul>
Probability	<ul style="list-style-type: none"> <li>▪ Determines if future events are more, less or equally likely, impossible or certain to occur</li> </ul>

<b>Conceptual Strand</b>	<b>Skills</b>
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>▪ Explains and demonstrates how a problem was solved (orally, visually or in written form) with supporting evidence</li> </ul>
Accuracy	<ul style="list-style-type: none"> <li>▪ Work is completed with care and minimal errors</li> <li>▪ Almost all work handed in on-time</li> </ul>

