

My Child's Learning - A Family Resource  
Grade 4 Mathematics - At A Glance

Organizing Idea	Grade 4 Learning Outcome	Highlights of your Child's Learning (by the end of Grade 4)
<b>Number</b>	Children investigate decimal numbers.	<ul style="list-style-type: none"> <li>● Write and say decimal numbers (Example 4.36)</li> <li>● Round numbers to various places, including tenths (Example, 4.7 rounds to 5)</li> <li>● Compare and order numbers, including decimal numbers</li> <li>● Express money in cents and dollars</li> </ul>
	Students add and subtract within 10 000, including decimal numbers to hundredths.	<ul style="list-style-type: none"> <li>● Add and subtract numbers, including decimal numbers, using standard algorithms, based on place value.</li> <li>● Estimation can be used to check the reasonableness of a sum or difference.</li> <li>● Solve problems using addition and subtraction, including problems involving money.</li> </ul>
	Students explain properties of prime and composite numbers using multiplication and division.	<ul style="list-style-type: none"> <li>● Determine the factors of a number within 100.</li> <li>● Describe a number as prime or composite.</li> <li>● Determine the first five multiples of a given number within 100.</li> <li>● Recognize the greatest common factor (greatest common divisor) of two numbers within 100.</li> </ul>
	Students multiply and divide natural numbers within 10 000.	<ul style="list-style-type: none"> <li>● Multiply and divide larger numbers using known multiplication and division facts of smaller numbers.</li> <li>● Choose the multiplication or division strategy based on the numbers involved.</li> <li>● Understand that the standard algorithm can be used to multiply and divide larger numbers.</li> </ul>
	Students apply equivalence to the interpretation of fractions.	<ul style="list-style-type: none"> <li>● Show that equivalent fractions represent the same point on a number line.</li> <li>● Simplify a given fraction by dividing the numerator and denominator by a common factor.</li> <li>● Show that a fraction and the equivalent decimal number are on the same point on a number line.</li> <li>● Convert fractions to decimals and decimals to fractions.</li> </ul>

	Students interpret percentages.	<ul style="list-style-type: none"> <li>Express the fraction, decimal, and percentage representations of the same relationship.</li> <li>Investigate percentage in familiar situations.</li> </ul>
<b>Algebra</b>	Students visualize and apply equality in multiple ways.	<ul style="list-style-type: none"> <li>Evaluate expressions following order of operations</li> <li>Solve an equation by determining an unknown value that makes the left and right sides of an equation equal.</li> </ul>
<b>Geometry</b>	Students interpret and explain geometric properties.	<ul style="list-style-type: none"> <li>Classify triangles according to side length and angles</li> <li>Classify quadrilaterals according to appropriate properties</li> <li>Determine if the side lengths and angle measures of one shape are the same as a second shape by reflecting, rotating or sliding one of the shapes.</li> </ul>
<b>Measurement</b>	Students interpret and express area.	<ul style="list-style-type: none"> <li>Understand that area is the amount of space inside a closed shape.</li> <li>Measure area with non-standard units or standard units.</li> <li>Determine area of a rectangle.</li> </ul>
<b>Patterns</b>	Students interpret and explain arithmetic and geometric sequences.	<ul style="list-style-type: none"> <li>Create and explain increasing or decreasing sequences</li> </ul>
<b>Time</b>	Students communicate duration with standard units of time.	<ul style="list-style-type: none"> <li>Relate durations of 15 minutes, 20 minutes, 30 minutes, 40 minutes, and 45 minutes to fractions of a circle. <ul style="list-style-type: none"> <li>Apply addition and subtraction to the calculation of duration.</li> <li>Convert between hours, minutes, and seconds</li> </ul> </li> </ul>
<b>Statistics</b>	Students evaluate the use of scale in graphical representations of data.	<ul style="list-style-type: none"> <li>formulating statistical questions</li> <li>collecting data</li> <li>representing data</li> <li>interpreting data</li> </ul>

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Grade 5 Mathematics - At A Glance

Organizing Idea	Grade 5 Learning Outcome	Highlights of your Child's Learning (by the end of Grade 5)
<b>Number</b>	Students analyze patterns in place value.	<ul style="list-style-type: none"> <li>● Express numbers within 10 000 000, including decimal numbers to thousandths, using words and numerals.</li> <li>● Relate a decimal number to its position on the number line.</li> <li>● Express the relationship between two numbers, including decimal numbers, using <math>&lt;</math>, <math>&gt;</math>, or <math>=</math></li> <li>● Round numbers, including decimal numbers, to various places according to context.</li> </ul>
	Students add and subtract within 1 000 000, including decimal numbers to thousandths, using standard algorithms.	<ul style="list-style-type: none"> <li>● Add and subtract numbers, including decimal numbers, using standard algorithms</li> <li>● Assess the reasonableness of a sum or difference using estimation</li> <li>● Solve problems using addition and subtraction, including problems involving money</li> </ul>
	Students determine divisibility of natural numbers.	<ul style="list-style-type: none"> <li>● Investigate divisibility by 0 through to 10</li> <li>● Generalize divisibility tests for 2, 3, and 5</li> <li>● Determine factors using divisibility tests</li> </ul>
	Students multiply and divide natural numbers within 100 000, including with standard algorithms.	<ul style="list-style-type: none"> <li>● Multiply up to 3-digit by 2-digit numbers using standard algorithms.</li> <li>● Divide 3-digit by 1-digit numbers using standard algorithms.</li> <li>● Assess the reasonableness of an answer using estimation.</li> <li>● Solve problems using multiplication and division.</li> </ul>
	Students interpret improper fractions.	<ul style="list-style-type: none"> <li>● Relate fractions, improper fractions, and mixed numbers to their positions on the number line.</li> <li>● Count beyond 1 using fractions with the same denominator.</li> <li>● Model fractions, including improper fractions and mixed numbers, using quantities, lengths, and areas.</li> <li>● Express improper fractions and mixed numbers symbolically.</li> </ul>

	Students add and subtract fractions with common denominators.	<ul style="list-style-type: none"> <li>Add and subtract fractions with common denominators within 100, including improper fractions and mixed numbers.</li> <li>Solve problems requiring addition and subtraction of fractions with common denominators, including improper fractions and mixed numbers.</li> </ul>
	Students employ ratios to represent relationships between quantities.	<ul style="list-style-type: none"> <li>Express ratios to describe various situations.</li> <li>Express, symbolically, the same part-whole relationship as a ratio, fraction, decimal, and percentage.</li> </ul>
<b>Algebra</b>	Students interpret numerical and algebraic expressions.	<ul style="list-style-type: none"> <li>Evaluate expressions with one or two terms following order of operations including brackets</li> <li>An equation with one or two operations is solved by determining an unknown value that makes the left and right sides of an equation equal.</li> </ul>
<b>Geometry</b>	Students investigate symmetry as a geometric property.	<ul style="list-style-type: none"> <li>Investigate reflection, rotation and lines of symmetry in 2-D and 3-D shapes</li> <li>Symmetry can be found in nature and in First Nations, Métis, and Inuit designs</li> <li>Classify 2-D shapes according to symmetry</li> </ul>
<b>Coordinate Geometry</b>	Students relate location to position on a grid.	<ul style="list-style-type: none"> <li>Location can be described using coordinates on a grid. (limited to quadrant 1)</li> </ul>
<b>Measurement</b>	Students estimate and calculate area using standard units.	<ul style="list-style-type: none"> <li>Relate length (cm, m and km) to area (cm<sup>2</sup>, m<sup>2</sup> and km<sup>2</sup>)</li> <li>Use a benchmark for a cm<sup>2</sup> or m<sup>2</sup> to estimate an area.</li> <li>Compare the perimeters of various rectangles with the same area.</li> </ul>
<b>Patterns</b>	Students relate terms to position within an arithmetic sequence.	<ul style="list-style-type: none"> <li>Describe the graph of a given context as a straight line.</li> <li>Write an algebraic expression that matches a table of values or a straight-line graph</li> </ul>
<b>Statistics</b>	Students analyze frequency in categorical data.	<ul style="list-style-type: none"> <li>Determine frequency (how often a value occurs) for each category of a set of data.</li> <li>Use the mode to justify answers to statistical questions</li> <li>Decide when it is useful to use open-ended or closed-list survey questions to gather data</li> <li>Categorize data that was collected using closed-list questions.</li> <li>Create various representations of data to interpret frequency.</li> </ul>

My Child's Learning - A Family Resource  
Grade 6 Mathematics - At A Glance

Organizing Idea	Grade 6 Learning Outcome	Highlights of your Child's Learning (by the end of Grade 6)
<b>Number</b>	Students investigate magnitude with positive and negative numbers.	<ul style="list-style-type: none"> <li>● Identify negative numbers in familiar contexts, including contexts that use vertical or horizontal models of the number line.</li> <li>● Compare and order positive and negative numbers.</li> <li>● Model and add any two negative or positive numbers (integers).</li> </ul>
	Students solve problems using standard algorithms for addition and subtraction.	<ul style="list-style-type: none"> <li>● Solve problems in various contexts (Example: money and measurement) using standard algorithms for addition and subtraction.</li> </ul>
	Students analyze numbers using prime factorization and exponentiation.	<ul style="list-style-type: none"> <li>● Compose a product in multiple ways, including with more than two factors.</li> <li>● Determine divisibility of a number from its prime factorization.</li> <li>● Express the product of identical factors as a power</li> </ul>
	Students apply standard algorithms to multiplication and division of decimal and natural numbers.	<ul style="list-style-type: none"> <li>● Multiply and divide numbers using standard algorithms</li> <li>● Check the reasonableness of a product or quotient by estimating..</li> <li>● Solve problems using multiplication and division, including problems involving money.</li> </ul>
	Students relate fractions to quotients.	<ul style="list-style-type: none"> <li>● Model and describe an equal-sharing situation in more than one way.</li> <li>● Express a fraction as a division statement and vice versa.</li> <li>● Change a fraction to a decimal using division.</li> </ul>
	Students add and subtract fractions with denominators within 100.	<ul style="list-style-type: none"> <li>● Express two fractions with common denominators.</li> <li>● Add and subtract fractions.</li> <li>● Solve problems involving addition and subtraction of fractions.</li> </ul>
	Students interpret the multiplication of natural numbers by fractions.	<ul style="list-style-type: none"> <li>● Multiply a number by a fraction.</li> <li>● Relate multiplication by a unit fraction to division.</li> <li>● Solve problems using multiplication of a fraction and a natural number.</li> </ul>

	Students apply equivalence to the interpretation of ratios and rates.	<ul style="list-style-type: none"> <li>• Determine whether two ratios are equivalent.</li> <li>• Relate percentage of a number to a proportion.</li> <li>• Determine a percent of a number, limited to percentages within 100%.</li> <li>• Solve problems involving ratios, rates, and proportions.</li> </ul>
<b>Algebra</b>	Students analyze expressions and solve algebraic equations.	<ul style="list-style-type: none"> <li>• Evaluate expressions involving operations in brackets and powers according to the order of operations.</li> <li>• Simplify algebraic expressions by combining like terms.</li> <li>• Determine different strategies for solving equations.</li> <li>• Solve problems using equations limited to one or two operations.</li> </ul>
<b>Geometry</b>	Students analyze shapes through symmetry and congruence.	<ul style="list-style-type: none"> <li>• Describe the symmetry between two shapes as reflection symmetry or rotational symmetry.</li> <li>• Symmetry is a relationship between two shapes that can be mapped exactly onto</li> </ul>
<b>Coordinate Geometry</b>	Students explain location and movement in relation to position in the Cartesian plane.	<ul style="list-style-type: none"> <li>• Location can be described using coordinates on a grid. (includes all 4 quadrants)</li> <li>• Create an image of a polygon in the Cartesian plane by reflecting, rotating or translating (sliding).</li> </ul>
<b>Measurement</b>	Students analyze areas of parallelograms and triangles.	<ul style="list-style-type: none"> <li>• Understand the characteristics of triangles and parallelograms related to length and area</li> <li>• Describe the relationship between the area of a triangle and the area of a parallelogram with the same base and height.</li> <li>• Determine the area of composite shapes using the areas of triangles and parallelograms.</li> </ul>
<b>Patterns</b>	Students investigate functions to enhance understanding of change.	<ul style="list-style-type: none"> <li>• Create a table of values related to the function.</li> <li>• Create a graph from the table of values.</li> <li>• Write an algebraic expression that represents a function.</li> <li>• Solve problems involving a function.</li> </ul>
<b>Statistics</b>	Students investigate relative frequency using experimental data.	<ul style="list-style-type: none"> <li>• Express relative frequencies as decimals, fractions, or percentages.</li> <li>• Collect categorized data through experiments.</li> <li>• Analyze relative frequency statistics from experiments with different sample sizes.</li> </ul>

For additional resources to support your math learner:

[Doing Mathematics with Your Child, Kindergarten to Grade 6, A Parent Guide](#)

[Helping Your Child Learn Math: A Parent's Guide](#)