

TIPS4Math Grades 1 to 8 Summary

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
<p>Sort and Classify Objects Using One Attribute</p> <ul style="list-style-type: none"> Sort by one attribute Create equal-sized sets Create different-sized sets 	<p>Sort and Classify Objects Using Two Attributes</p> <ul style="list-style-type: none"> Sort by two attributes Identify and describe sorting attributes 	<p>Sort and Classify Objects Using Two or More Attributes</p> <ul style="list-style-type: none"> Sort by two or more attributes Identify and describe sorting attributes 	<p>Collect, Organize, Display and Interpret Categorical Data</p> <ul style="list-style-type: none"> Create and conduct surveys Organize data <ul style="list-style-type: none"> tally charts Display and interpret data using appropriate scales <ul style="list-style-type: none"> pictographs, bar graphs introduction to double bar graphs 	<p>Collect, Organize and Display Primary Data</p> <ul style="list-style-type: none"> Create and conduct a survey Organize and display discrete or continuous data using an appropriate scale and graph <ul style="list-style-type: none"> pictograph, bar graph, double bar graph, stem and leaf plot 	<p>Collect, Organize and Display Primary and Secondary Data</p> <ul style="list-style-type: none"> Create and conduct a survey Organize, and display discrete and continuous data using a variety of graphs including continuous line graphs where appropriate 	<p>Collect, Organize and Display Data</p> <ul style="list-style-type: none"> Create and conduct a survey <ul style="list-style-type: none"> distinguish between sample and census of a population identify bias Organize, and display discrete and continuous data using a variety of graphs 	<p>Collect, Organize and Display Data</p> <ul style="list-style-type: none"> Create and conduct a survey or experiment involving numerical data Organize, and display data using a variety of graphs including histograms where appropriate
<p>Count Forward to 50 and Backwards from 20</p> <ul style="list-style-type: none"> Estimate and count objects in a set Reinforce anchors of 5 and 10 Skip count using: <ul style="list-style-type: none"> organized and open structures <ul style="list-style-type: none"> a variety of tools Count flexibly 	<p>Count Forward to 100 and Backwards from 50</p> <ul style="list-style-type: none"> Estimate and count objects in a set Reinforce anchors of 5 and 10 Skip count using: <ul style="list-style-type: none"> organized and open structures <ul style="list-style-type: none"> a variety of tools Count flexibly 	<p>Count Forward to 200 and Backwards from 50 and 500</p> <ul style="list-style-type: none"> Estimate and count objects in a set Reinforce anchors of 5 and 10 Skip count using: <ul style="list-style-type: none"> organized and open structures <ul style="list-style-type: none"> a variety of tools Count flexibly 					
<p>Linear Measurement Involving Numbers to 50 – Non-Standard Units</p> <ul style="list-style-type: none"> Establish principles of linear measuring Measure and record using non-standard units Investigate the relationship between size and number of units Construct tools to measure in non-standard units 	<p>Linear Measurement Involving Numbers to 100 – Non-Standard Units</p> <ul style="list-style-type: none"> Estimate, measure and record using non-standard units and different-sized tools Reinforce the relationship between size and number of units 	<p>Linear Measurement Involving Numbers to 200 – Standard Units</p> <ul style="list-style-type: none"> Estimate, measure, record, and draw using centimetres Estimate, measure, and record using metres Compare and order centimetre and metre measures Solve linear measurement problems using: <ul style="list-style-type: none"> different units the same unit 	<p>Linear Measurement</p> <ul style="list-style-type: none"> Estimate, measure, and record length, height, and distance using millimetres, centimetres, metres, and kilometres Draw given lengths (mm, cm) using estimation and tools Investigate the relationship between mm, cm, dm, m, and km 	<p>Linear Measurement</p> <ul style="list-style-type: none"> Estimate, measure, and record length, height, width, distance, and perimeter using appropriate units (millimetres, centimetres, decimetres, metres, kilometres) 	<p>Construct from Measurements – Linear, Perimeter, Area</p> <ul style="list-style-type: none"> Estimate, measure, and record length, perimeter, and area using appropriate metric units Construct rectangles, squares, triangles, and parallelograms with a given perimeter Construct rectangles and squares with a given area 		

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
<p>Equality Involving Numbers to 10</p> <ul style="list-style-type: none"> • Decompose to establish conservation (equality) • Establish equality using: <ul style="list-style-type: none"> o organized and open structures <ul style="list-style-type: none"> ▪ a variety of tools • Use equality to find the value of an unknown 	<p>Addition, Subtraction and Equality Involving Numbers to 20</p> <ul style="list-style-type: none"> • Add, subtract, and identify strategies • Solve addition and subtraction problems using a variety of tools • Decompose to establish equality using a variety of tools • Use equality to find the value of an unknown while adding or subtracting • Investigate the Zero and Commutative Properties 	<p>Addition, Subtraction and Equality Involving Numbers to 100</p> <ul style="list-style-type: none"> • Flexibly add and subtract <ul style="list-style-type: none"> o identify strategies • Solve addition and subtraction problems using a variety of tools • Decompose to establish place value • Use equality to find the value of an unknown while flexibly adding or subtracting • Investigate the Associative Property 	<p>Mental Math, Multiplicative Relationships and Equality</p> <ul style="list-style-type: none"> • Add and subtract two-digit whole numbers <ul style="list-style-type: none"> o identify strategies • Multiply to 9×9 and by 10, 100, and 1000 • Divide to $81 \div 9$ and by 10 and 100 with whole number results • Use equality to find the value of an unknown while multiplying or dividing • Investigate multiplicative relationships involving unit rates • Solve problems involving the above operations 	<p>Mental Math, Multiplicative Relationships and Equality</p> <ul style="list-style-type: none"> • Use a variety of mental strategies to solve addition, subtraction, and multiplication problems involving whole numbers • Investigate variables as unknown quantities • Determine missing numbers in equations and verify 	<p>Mental Math, Whole Number Relationships and Order of Operations</p> <ul style="list-style-type: none"> • Use a variety of mental strategies to solve addition, subtraction, multiplication, and division problems involving whole numbers • Explain the relationship between prime and composite numbers • Investigate the order of operations 	<p>Whole Number Relationships and Operations</p> <ul style="list-style-type: none"> • Generate factors and multiples • Investigate squares and square roots • Evaluate multi-step expressions using order of operations • Solve multi-step problems 	<p>Whole Number Relationships and Powers of Ten</p> <ul style="list-style-type: none"> • Determine common factors and multiples using prime factorization • Express repeated multiplication in exponential form • Estimate and verify squares and square roots • Represent whole numbers in expanded form using powers of ten • Multiply and divide decimal numbers by powers of ten
					<p>Equality – Unknown Quantities</p> <ul style="list-style-type: none"> • Identify the quantities in an equation that change and those that remain constant • Solve problems that involve substituting numbers for the variables in an expression • Solve for a single unknown, through investigation 	<p>Unknown Quantities</p> <ul style="list-style-type: none"> • Model and write algebraic expressions • Evaluate expressions using substitution • Solve linear equations and verify solutions <ul style="list-style-type: none"> o inspection, guess and check 	<p>Unknown Quantities</p> <ul style="list-style-type: none"> • Investigate real-life applications of algebra • Investigate the relationship between the number of edges and vertices of polyhedrons, and express using algebra • Model and write algebraic expressions and equations • Evaluate expressions using substitution • Solve linear equations and verify solutions <ul style="list-style-type: none"> o inspection, guess and check, and balance model

TIPS4Math Grades 1 to 8 Summary

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
<p>Compose/Decompose and Represent Numbers to 20</p> <ul style="list-style-type: none"> • Represent numbers to 20 <ul style="list-style-type: none"> o concretely o using mathematical structures o flexibly • Compose, decompose numbers to 20 	<p>Compose/Decompose, Represent, Compare and Order Numbers to 50</p> <ul style="list-style-type: none"> • Represent numbers to 50 <ul style="list-style-type: none"> o using mathematical structures that reinforce anchors of 5 and 10 o using mathematical structures that support place value o in flexible ways • Compose and decompose: <ul style="list-style-type: none"> o numbers to 50 o money amounts up to 50 cents • Compare and order numbers to 50 based on quantity • Represent, compare, and order numbers to 50 using a number line 	<p>Compose/Decompose, Represent, Compare and Order Numbers to 100</p> <ul style="list-style-type: none"> • Represent numbers to 100 <ul style="list-style-type: none"> o using mathematical structures that reinforce anchors of 5 and 10 o using mathematical structures that support place value o in flexible ways • Compose and decompose numbers to 100 using a variety of models • Compare and order numbers to 100 based on quantity • Represent, compare and order numbers to 100 using a number line • Solve problems involving rounding to the nearest ten 	<p>Represent, Compare and Order Numbers 0 to 10 000</p> <ul style="list-style-type: none"> • Read and print whole numbers to 1000 • Represent, compare and order whole numbers to 10 000 • Rounding 4-digit whole numbers to 10, 100, 1000 	<p>Represent, Compare, and Order Numbers 0.01 to 10 000</p> <ul style="list-style-type: none"> • Represent, read, and print whole numbers to 10 000 • Compare and order whole numbers to 10 000 • Represent, compare and order decimal and mixed decimal numbers to 0.01 to 10 000 • Investigate the relationship between 1, 0.1, and 0.01 • Count forward by hundredths from any decimal hundredth less than one • Demonstrate and explain equivalent representations of decimals and fractions 	<p>Represent, Compare and Order Numbers 0.01 to 1 000 000</p> <ul style="list-style-type: none"> • Read and print whole numbers to 100 000 • Represent, compare and order numbers 0.01 to 1 000 000 • Solve problems that relate to the magnitude of whole numbers to 1 million 	<p>Represent, Compare and Order Integers</p> <ul style="list-style-type: none"> • Identify and represent integers <ul style="list-style-type: none"> o zero pairs • Compare and order integers 	<p>Represent, Compare and Order Rational Numbers</p> <ul style="list-style-type: none"> • Represent rational numbers • Make connections between whole numbers, decimal numbers, fractions, integers, and rational numbers • Compare and order rational numbers

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<p>Addition and Subtraction Problems with Sums to 10</p> <ul style="list-style-type: none"> • Add, subtract and identify strategies • Solve a variety of problems that involve addition and/or subtraction 	<p>Addition and Subtraction Problems with Sums to 20</p> <ul style="list-style-type: none"> • Add, subtract and identify strategies • Solve a variety of problems that involve addition and/or subtraction 	<p>Addition and Subtraction Problems with Sums to 100</p> <ul style="list-style-type: none"> • Add, subtract and identify strategies • Solve a variety of problems that involve addition and/or subtraction 	<p>Operations Involving Numbers 0 to 10 000</p> <ul style="list-style-type: none"> • Add and subtract four-digit whole numbers • Multiply and divide 2-digit by 1-digit whole numbers • Investigate and apply the commutative and distributive properties • Connect between student-generated and standard algorithms for multiplication and division • Solve problems involving addition, subtraction, and multiplication 	<p>Operations Involving Numbers 0.01 to 10 000</p> <ul style="list-style-type: none"> • Multiply 2-digit by 2-digit whole numbers • Divide 3-digit by 1-digit whole numbers • Solve whole number multiplication and division problems • Add and subtract decimal numbers to hundredths • Solve problems involving addition and subtraction of decimal numbers 	<p>Operations Involving Numbers 0.01 to 1 000 000</p> <ul style="list-style-type: none"> • Solve problems involving addition and subtraction of whole and decimal numbers • Multiply and divide 4-digit by 2-digit whole numbers • Solve problems involving multiplication and division up to 4-digit by 2-digit whole numbers • Solve problems involving multiplication and division that involve decimal tenths with whole numbers 	<p>Represent, Compare, Order and Operate Using Decimal Numbers</p> <ul style="list-style-type: none"> • Represent, compare, and order decimal numbers to hundredths • Add and subtract decimal numbers • Multiply and divide to thousandths by whole numbers • Apply order of operations to evaluate numerical expressions involving whole and decimal numbers • Solve single- and multi-step problems involving operations with whole and decimal numbers • Convert between first degree metric units • Solve real-life problems that require conversions 	<p>Multi-Step Problems Involving Whole and Decimal Numbers</p> <ul style="list-style-type: none"> • Add, subtract, multiply, and divide whole and decimal numbers • Solve multi-step problems involving whole and decimal numbers
<p>Compare and Order Numbers to 20</p> <ul style="list-style-type: none"> • Estimate quantities • Compare and order numbers to 20 based on quantity • Compare and order numbers to 20 using a number line 	<p>Multiplication and Division with Products to 20</p> <ul style="list-style-type: none"> • Decompose numbers into groups of equal size • Investigate combining equal groups (multiplication) • Investigate partitioning into equal groups (division) • Investigate division as equal sharing: <ul style="list-style-type: none"> o find the number of items in a group o find the number of groups for a set of items 	<p>Multiplication up to 7 x 7 and Division to 49 ÷ 7</p> <ul style="list-style-type: none"> • Multiply and divide using a variety of mental strategies 					

TIPS4Math Grades 1 to 8 Summary

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
<p>Geometric Properties and Composition of 2D Shapes</p> <ul style="list-style-type: none"> Sort common 2D shapes Identify and describe the attributes of <ul style="list-style-type: none"> regular and irregular triangles squares and other rectangles circles Locate and identify lines of symmetry in 2D shapes Compose and decompose common 2D shapes 	<p>Geometric Properties and Composition of 2D Shapes</p> <ul style="list-style-type: none"> Sort, classify, and identify regular and irregular polygons according to their geometric properties Locate lines of symmetry in regular and irregular polygons Compose and decompose polygons 	<p>Angles, Geometric Properties and Composition of 2D Shapes</p> <ul style="list-style-type: none"> Identify and investigate right angles Sort, classify, and identify regular and irregular polygons according to their geometric properties Compare angles of various types of polygons Compare various types of quadrilaterals Compose shapes using greatest and least number of polygons Identify congruent 2D shapes 	<p>Angles and Geometric Properties of 2D Shapes</p> <ul style="list-style-type: none"> Identify benchmark angles and compare other angles to benchmarks i.e., straight, right, half-right angles relative to a shape or to two line segments Sort, classify, identify, and compare regular and irregular quadrilaterals according to their geometric properties Draw lines of symmetry 	<p>Angles and Geometric Properties of 2D Shapes</p> <ul style="list-style-type: none"> Measure and construct angles up to 90° Classify two-dimensional shapes that are regular and irregular polygons Identify and classify angles in polygons Identify and classify triangles according to angle and side properties Construct triangles given properties of the triangle 	<p>Angles and Geometric Properties of 2D Shapes</p> <ul style="list-style-type: none"> Measure, construct, and classify angles to 180° Construct polygons given angle and side measures Sort and classify polygons according to their number of lines of symmetry and order of rotational symmetry Sort and classify quadrilaterals according to symmetry, angle and side properties 	<p>Angles and Geometric Properties of 2D Shapes</p> <ul style="list-style-type: none"> Construct: <ul style="list-style-type: none"> parallel and perpendicular lines using angle properties lines intersecting at 30°, 45°, 60° angle bisectors perpendicular bisectors Sort and classify triangles and quadrilaterals according to symmetry, angle and side properties Investigate the minimum side and angle information to describe and create a unique triangle 	<p>Angles and Geometric Properties of 2D Shapes</p> <ul style="list-style-type: none"> Investigate and describe applications of geometric properties in the real world Investigate diagonal properties of quadrilaterals Sort and classify quadrilaterals according to diagonals, parallel lines, symmetry, angle and side properties Investigate and solve problems related to: <ul style="list-style-type: none"> angle relationships for intersecting and parallel lines the sum of the interior angles of a triangle

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<p>Area – Non-Standard Units</p> <ul style="list-style-type: none"> Develop the concept of area Investigate non-standard units of area Establish principles of measuring area Estimate and measure area using the same non-standard measurement tool Compare objects based on area 	<p>Area and Perimeter – Non-Standard Units</p> <ul style="list-style-type: none"> Estimate, measure, and record area Investigate the relationship between the unit of area and the number of units Estimate, measure, and record distance around straight and curved objects using a variety of non-standard tools 	<p>Area – Non-Standard and Square Units, Perimeter – Standard Units</p> <ul style="list-style-type: none"> Measure and compare areas in non-standard and square units using a variety of tools Investigate the relationship between size of a unit and number of units Estimate and/or measure and record perimeter (cm, m, km) Compare shapes with the same perimeter 	<p>Perimeter and Area Involving Whole Numbers</p> <ul style="list-style-type: none"> Estimate, measure and record perimeter and area of polygons using an appropriate standard unit (mm/square mm, cm/ sq. cm, m/ sq. m, km/sq. km) Investigate the relationship between the side lengths of a rectangle and its: <ul style="list-style-type: none"> perimeter area Pose and/or solve problems that require distinguishing between perimeter and area Determine missing measures in perimeter and area problems Compare polygons with the same perimeter or same area 	<p>Perimeter and Area</p> <ul style="list-style-type: none"> Estimate, measure and record perimeter and area of regular/ irregular polygons using an appropriate standard unit (mm/ square mm, cm/ sq. cm, dm/sq. dm, m/sq. m, km/sq. km) Investigate to develop perimeter and area formulas for rectangles Solve problems requiring the estimations and calculation of perimeter and area of rectangles including those involving unit conversions Determine missing measures in perimeter and area problems Create polygons with the same perimeter or same area 	<p>Area of Parallelograms and Triangles</p> <ul style="list-style-type: none"> Investigate area relationships between rectangles, parallelograms and triangles Develop area formulas for parallelograms and triangles Solve problems involving the estimation and calculation of area of triangles and parallelograms including those requiring unit conversions from square m to square cm Determine missing measures in area problems Construct parallelograms and triangles with a given area 	<p>Area</p> <ul style="list-style-type: none"> Research and report on real-life applications of area Relate exponential notation and measurement of area e.g. square centimetres and cm^2 Estimate and calculate area of composite shapes made up of rectangles, triangles, and/or parallelograms Develop formula for the area of a trapezoid through investigation by relating it to the area of a parallelogram Solve area problems involving the estimation and calculation of area of polygons including those requiring unit conversions between m^2 and cm^2 Determine missing measures in area problems <ul style="list-style-type: none"> substitute natural numbers for variables solve for one of the linear measures 	<p>Circles</p> <ul style="list-style-type: none"> Estimate and measure the circumference, radius, and diameter of circular objects Investigate the relationship between circumference and diameter Develop formula for circumference Investigate the relationship between area and radius of a circle Develop formula for the area of a circle Solve circumference and area problems including conversions between m^2 and cm^2 Pose and/or solve problems that require distinguishing between circumference and area Construct a circle given its centre and radius, its centre and a point on the circle, or three points on the circle

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<p>Collect, Organize and Read Categorical Data</p> <ul style="list-style-type: none"> Sort and organize up to 50 objects based on one attribute Collect and display primary categorical data involving one-to-one correspondence in a prepared template: <ul style="list-style-type: none"> concrete graphs pictographs Read and describe data using comparative language Pose and answer questions based on collected data 	<p>Collect, Organize and Read Categorical and Discrete Data</p> <ul style="list-style-type: none"> Create and conduct a simple survey with a limited number of responses Collect, organize, and display categorical and/or discrete data involving one-to-one correspondence including tally charts, simple bar graphs and line plots Distinguish between data values and frequency Read, describe and compare data using mathematical language Pose and answer questions based on collected data 	<p>Collect, Organize and Interpret Categorical and Discrete Data</p> <ul style="list-style-type: none"> Create and conduct a simple survey on a variety of topics Collect, organize, and display categorical and/or discrete data involving many-to-one correspondence including horizontal and vertical bar graphs Read and describe primary data using comparative language <ul style="list-style-type: none"> introduction to mode Interpret and make connections between tally charts, pictographs and bar graphs 	<p>Collect, Organize, Display and Interpret Numerical Data</p> <ul style="list-style-type: none"> Create and conduct a survey or experiment to collect numerical data Organize and display discrete primary data using appropriate scales including double bar graphs Investigate and develop an understanding of median and range Read, interpret, and compare primary and secondary data using mode, median, and the shape of the data over its range 	<p>Collect, Organize, Display and Interpret Numerical Data</p> <ul style="list-style-type: none"> Collect data by conducting a sample population survey or an experiment and record observations using appropriate means Distinguish between discrete and continuous data Collect and display discrete or continuous primary and secondary data including broken-line graphs Read, interpret, and draw conclusions from primary and secondary data presented in charts, tables, and graphs using mean, mode, median, and the shape of the data over its range Compare related data sets 	<p>Interpret Data</p> <ul style="list-style-type: none"> Read, interpret, and draw conclusions from primary and secondary data presented in charts, tables, and graphs Investigate how changing scales on graphs can influence conclusions Apply mean as a way to compare related data sets 	<p>Data Analysis and Interpretation</p> <ul style="list-style-type: none"> Read, interpret, and draw conclusions from primary and secondary data presented in charts, tables, and graphs Investigate graphs that present data in misleading ways Collect and display discrete or continuous primary and secondary data including frequency tables and circle graph <ul style="list-style-type: none"> identify bias in collection methods Distinguish between census and sample Explore how altering the values in a data set impacts measures of central tendency Identify and describe trends based on distribution of data 	<p>Data Analysis and Interpretation</p> <ul style="list-style-type: none"> Create, conduct and analyze an experiment or survey that compares two attributes Collect and display discrete or continuous primary and secondary data including frequency tables with intervals, histograms and scatter plots Read, interpret, and draw conclusions from primary and secondary data presented in charts, tables, and graphs Explain the relationship between census, representative sample, sample size and population Determine the most appropriate measure of central tendency to compare sets of data Identify and describe trends based on the rate of change of data

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<p>Fractions – Equal Partitioning into Halves and Fourths</p> <ul style="list-style-type: none"> Explore fractions through the equal partitioning of a variety of models into halves and fourths Identify, name and count unit fractions 	<p>Represent Fractions</p> <ul style="list-style-type: none"> Represent fractions by equally partitioning a whole into halves, thirds, fourths, and eighths using a variety of models Identify, name, and count unit fractions beyond a whole Compose wholes using unit fractions 	<p>Represent Fractions</p> <ul style="list-style-type: none"> Represent fractions by equally partitioning a whole into halves, thirds, fourths, fifths, and eighths using a variety of models Identify and name any fraction, including beyond a whole, relative to its unit fraction 	<p>Represent, Compare and Order Fractions</p> <ul style="list-style-type: none"> Represent fractions by equally partitioning a whole into halves, thirds, fourths, fifths, eighths, and tenths using a variety of models <ul style="list-style-type: none"> introduce standard fractional notation Compare and order fractions beyond a whole with same units and relative to benchmark and familiar fractions Compose and decompose fractions using unit fraction Count by unit fractions to make sense of the meaning of a fraction, its numerator and its denominator Identify and describe fractions between two given fractions <ul style="list-style-type: none"> recognize there are infinite possibilities (density) 	<p>Represent, Compare and Order Fractions</p> <ul style="list-style-type: none"> Represent fractions by equally partitioning a whole into halves, thirds, fourths, fifths, sixths, eighths, and tenths using a variety of models Investigate equivalency through merging and splitting Compare and order fractions beyond a whole using a variety of strategies: <ul style="list-style-type: none"> relative to benchmarks or familiar fractions same units (denominator) same count (numerator) equivalency 	<p>Fractions, Ratios and Rates</p> <ul style="list-style-type: none"> Equally partition a whole using a variety of models, identify and name a fraction in relation to its unit fraction Represent fractions using a variety of models Represent, compare and order fractions beyond a whole using appropriate strategies Represent ratios and explore the relationship between part-whole ratios, part-part ratios and fractions Represent relationships using unit rates Solve problems using ratio and unit rates 	<p>Represent, Compare, Order and Operate Using Fractions</p> <ul style="list-style-type: none"> Represent, compare and order fractions using a variety of models and strategies Compose and decompose fractions and solve related addition and subtraction problems Add and subtract fractions with like or unlike denominators using a variety of models and strategies Demonstrate the relationship between the repeated addition of fractions and the multiplication of that fraction by a whole number Divide whole numbers by simple fractions 	<p>Operations Involving Fractions</p> <ul style="list-style-type: none"> Represent the multiplication and division of fractions and determine the product and quotient Solve problems involving addition, subtraction, multiplication and/or division of fractions with simple fractions in real-life contexts <ul style="list-style-type: none"> use estimation to check for reasonableness Evaluate up to three term expressions that include the substitution of fractions

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Location and Symmetry <ul style="list-style-type: none"> • Describe locations <ul style="list-style-type: none"> o using positional language o on concrete maps • Create symmetrical designs and pictures and describe relative location 	Location, Movement and Symmetry <ul style="list-style-type: none"> • Describe relative location and movement on a map • Draw simple maps • Create symmetrical designs and identify lines of symmetry 	Location, Movement and Symmetry <ul style="list-style-type: none"> • Describe movement on a grid • Identify transformations <ul style="list-style-type: none"> o on a grid o in physical space • Investigate geometric patterns involving transformations • Complete and describe lines of symmetry in designs and pictures 	Location, Movement and Geometric Patterns <ul style="list-style-type: none"> • Describe location on a grid system • Identify, perform, and describe reflections • Create repeating patterns that result from reflections and make predictions • Create and analyse symmetrical designs created by reflections 	Location, Movement and Geometric Patterns <ul style="list-style-type: none"> • Describe location using cardinal directions on a map and a coordinate system • Compare grid systems • Create, identify, and extend geometric patterns • Create repeating patterns that result from translations and make predictions • Create and analyse designs by translating and/or reflecting 	Location, Movement and Geometric Patterns <ul style="list-style-type: none"> • Describe location and plot points in the first quadrant of the Cartesian coordinate plane • Create, describe, and extend repeating patterns from rotations • Create and analyse designs by reflecting, translating, and rotating 	Location and Transformations <ul style="list-style-type: none"> • Describe location and plot points on the Cartesian coordinate plane • Identify, perform and describe dilations, rotations, reflections, translations (transformations) • Distinguish between transformations that create similar shapes and those that create congruent shapes • Create and analyse designs using transformations including tiling a plane 	Location and Movement <ul style="list-style-type: none"> • Plot points and their image points resulting from transformations on the Cartesian coordinate plane • Identify through investigation real-world movements that are transformations (translations, reflections, rotations)

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<p>Patterns – Repeating</p> <ul style="list-style-type: none"> • Represent a variety of repeating patterns including geometric, numeric, action, rhythm, etc. • Create; identify, describe, and extend through investigation, geometric repeating patterns involving one-attribute • Identify and extend through investigation numeric repeating patterns • Identify pattern rules 	<p>Patterns – Repeating, Growing, Shrinking</p> <ul style="list-style-type: none"> • Create and represent growing or shrinking patterns including geometric, numeric, action, rhythm, etc. • Create, identify, describe, and extend geometric repeating patterns involving two-attributes • Identify, and extend through investigation growing and shrinking patterns involving addition and subtraction • Make connections between patterns and repeated operations or changes to an attribute 	<p>Patterns – Geometric and Numeric</p> <ul style="list-style-type: none"> • Create, identify, describe, and extend geometric repeating patterns involving two-attributes • Represent geometric patterns and make connections to numeric representations • Extend repeating, growing and shrinking number patterns • Identify, and extend through investigation number patterns involving addition, subtraction, and multiplication • Create number patterns from a number line representation or pattern rule • Make connections between patterns and repeated operations, changes to an attribute, or using a transformation 	<p>Numeric Patterns</p> <ul style="list-style-type: none"> • Create, extend, and describe repeating, growing and shrinking number patterns • Make predictions related to numeric repeating patterns • Connect each term in a growing and shrinking pattern with its term number, using a table of values • Create number patterns from a pattern rule 	<p>Numeric Patterns</p> <ul style="list-style-type: none"> • Create and represent, growing and shrinking number patterns in a variety of ways including the use of a table of values • Make predictions related to growing and shrinking patterns • Identify and extend through investigation, number patterns involving addition, subtraction, multiplication, and division • Create number patterns from a pattern rule 	<p>Numeric Patterns</p> <ul style="list-style-type: none"> • Represent geometric patterns numerically • Make predictions about numeric patterns • Describe pattern rules in words that generate patterns by adding, subtracting, multiplying, and dividing by a constant • Create graphical representations of patterns in the first quadrant • Determine a term given its term number and vice versa from a variety of representations including table of values 	<p>Linear Growing Patterns</p> <ul style="list-style-type: none"> • Identify and represent linear growing patterns in a variety of ways including algebraic expressions • Make predictions about linear growing patterns • Create an algebraic expression with one operation to represent the general term from a variety of representations and a pattern rule • Model real-life linear relationships in a variety of ways and use them to solve problems • Solve linear equations to find the term value or term number by: <ul style="list-style-type: none"> o guess and check o inspection o modelling 	<p>Linear Relationships</p> <ul style="list-style-type: none"> • Identify and represent linear growing patterns in a variety of ways • Make predictions about linear growing patterns • Create an algebraic expression with up to two operations to represent the general term from a variety of representations and a pattern rule • Make connections between equivalent algebraic expressions representing the general term of a linear pattern • Model real-life linear relationships in a variety of ways and use them to solve problems • Solve linear equations to find the term value or term number by: <ul style="list-style-type: none"> o guess and check o inspection o modelling o balance model

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
<p>Count Forward to 100 and Backwards from 20</p> <ul style="list-style-type: none"> Estimate and count objects in a set Reinforce anchors of 5 and 10 Skip count using: <ul style="list-style-type: none"> o organized and open structures <ul style="list-style-type: none"> ▪ a variety of tools Count flexibly 	<p>Count Forward to 200 and Backwards from 50 and 100</p> <ul style="list-style-type: none"> Estimate and count objects in a set Reinforce anchors of 5 and 10 Skip count using: <ul style="list-style-type: none"> o organized and open structures <ul style="list-style-type: none"> ▪ a variety of tools Count flexibly 	<p>Count Forward to 1000 and Backwards from 100 and 1000</p> <ul style="list-style-type: none"> Estimate and count objects in a set Reinforce anchors of 5 and 10 Skip count using: <ul style="list-style-type: none"> o organized and open structures <ul style="list-style-type: none"> ▪ a variety of tools Count flexibly 					
<p>3D Figures</p> <ul style="list-style-type: none"> Sort and classify common 3D figures Trace and identify 2D shapes from the faces of 3D figures Identify everyday objects that are similar to 3D figures Build structures using concrete materials and describe the 2D faces 	<p>3D Figures</p> <ul style="list-style-type: none"> Sort and classify 3D figures Distinguish between attributes that are geometric and non-geometric Identify and describe common 3D figures Create models and skeletons of prisms and pyramids Build structures using 3D figures and describe the 2D faces and 3D figures that comprise it 	<p>3D Figures</p> <ul style="list-style-type: none"> Compare and sort prisms and pyramids by geometric properties Name prisms and pyramids by the shape of their base Construct a rectangular prism <ul style="list-style-type: none"> o identify the 2D faces that comprise it o describe its geometric properties 	<p>3D Figures</p> <ul style="list-style-type: none"> Identify and describe prisms and pyramids and classify them by their geometric properties Construct prisms and pyramids from pictures or models and nets Construct and draw skeletons of prisms and pyramids Draw and describe nets of rectangular and triangular prisms Construct 3D figures using only congruent shapes 	<p>3D Figures</p> <ul style="list-style-type: none"> Distinguish among prisms, pyramids and other 3D Figures Identify prisms and pyramids from nets Construct nets of prisms and pyramids 	<p>3D Figures</p> <ul style="list-style-type: none"> Build 3D models given isometric sketch or different views Sketch isometric perspectives and different views of 3D figures built with interlocking cubes 	<p>Measurement, Surface Area, Volume</p> <ul style="list-style-type: none"> Classify prisms Investigate the relationship between the height, the area of the base, and the volume of right prisms and generalize to develop the formula for volume and use it Investigate and determine surface area of right prisms Solve problems that involve distinguishing between surface area and volume, that require metric conversions 	<p>Cylinders</p> <ul style="list-style-type: none"> Research, describe, and report on applications of volume and capacity Investigate the relationship between the height, the area of the base, and the volume of a cylinder and generalize to develop the formula for volume and use it Investigate and determine surface area of cylinders Solve problems that involve distinguishing between surface area and volume, that require metric conversions

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
<p>Mass – Non-Standard Units</p> <ul style="list-style-type: none"> Establish the concept of mass and the use of a balance scale Measure mass using a balance scale and non-standard units Investigate the relationship between the mass of a unit, the overall mass and the number of units Compare the mass of two or three objects <ul style="list-style-type: none"> explore equality using a balance scale 	<p>Mass – Non-Standard Units</p> <ul style="list-style-type: none"> Estimate, measure and record mass using non-standard units and a balance scale Compare and order masses <ul style="list-style-type: none"> explore equality using a balance scale 	<p>Mass – Standard Units</p> <ul style="list-style-type: none"> Establish the kilogram as a benchmark Estimate, measure, and record mass using kilogram and parts of kilograms Compare and order objects using kilograms and parts of kilograms 	<p>Mass</p> <ul style="list-style-type: none"> Investigate the relationship between grams and kilograms Estimate, measure, and record mass using grams and kilograms Compare and order objects by mass using grams and kilograms Justify the most appropriate standard unit to measure mass (milligram, gram, kilogram) 	<p>Mass</p> <ul style="list-style-type: none"> Select and justify the most appropriate standard unit to measure mass (milligram, gram, kilogram, tonne) 	<p>Mass</p> <ul style="list-style-type: none"> Estimate, measure, and record mass using metric units Solve problems involving conversions from kilograms to grams 		
<p>Capacity – Non-Standard Units</p> <ul style="list-style-type: none"> Establish the concept of capacity and principles of measuring Measure capacity using non-standard units Investigate the relationship between the capacity of a unit, the overall capacity, and the number of units Select a non-standard unit to measure the capacity of various containers Compare the capacity of two or three containers 	<p>Capacity – Non-Standard Units</p> <ul style="list-style-type: none"> Estimate, measure, and record capacity using non-standard units Investigate the relationship between the capacity of a unit, the overall capacity, and the number of units Select a non-standard unit to measure the capacity of various containers Compare and order a collection of containers by capacity 	<p>Capacity – Standard Units</p> <ul style="list-style-type: none"> Establish the litre as a benchmark Estimate, measure, and record capacity using litres and parts of a litre Compare and order capacities of various containers using litres and parts of a litre 	<p>Volume and Capacity</p> <ul style="list-style-type: none"> Estimate, measure, and record volume using concrete materials Determine through investigation the relationship between millilitres and litres Estimate, measure, and record capacity using litres and millilitres Select and justify the most appropriate standard unit to measure capacity of a container (millilitre, litre) Compare and order capacities 	<p>Volume and Capacity</p> <ul style="list-style-type: none"> Investigate the relationship between the height, the area of the base, and the volume of rectangular prisms and generalize to develop the formula for volume and use it Determine through investigation the relationship between capacity and volume 	<p>Volume, Surface Area and Capacity</p> <ul style="list-style-type: none"> Investigate the relationship between the height, the area of the base, and the volume of triangular prisms and generalize to develop the formula for volume and use it Through investigation determine surface area of rectangular and triangular prisms and solve related problems Estimate, measure and record volume and capacity Solve problems that involve distinguishing between surface area, volume, and capacity including those that require metric conversions 		

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
<p>Represent Numbers to 50</p> <ul style="list-style-type: none"> • Compose and decompose: <ul style="list-style-type: none"> o numbers to 20 o money amounts up to 20 cents • Represent numbers to 50: <ul style="list-style-type: none"> o concretely o using mathematical structures o flexibly 	<p>Compose/Decompose, Represent, Compare and Order Numbers to 100</p> <ul style="list-style-type: none"> • Compose and decompose: <ul style="list-style-type: none"> o numbers to 100 o money amounts up to 100 cents • Represent numbers to 100: <ul style="list-style-type: none"> o using mathematical structures that reinforce anchors of 5 and 10 o using mathematical structures that support place value o in flexible ways • Compare and order numbers to 100 based on quantity • Represent, compare, and order numbers to 100 using a number line 	<p>Compose/Decompose, Represent, Compare and Order Numbers to 1000</p> <ul style="list-style-type: none"> • Represent and explain the relationship among 1, 10, 100, and 1000: • Compose and decompose three-digit numbers using a variety of models • Represent, compare, and order numbers to 1000: <ul style="list-style-type: none"> o using mathematical structures that support place value o in flexible ways 	<p>Represent, Compare and Order Numbers 0.1 to 10 000</p> <ul style="list-style-type: none"> • Represent, compare, order decimal tenths up to 10 000 using: <ul style="list-style-type: none"> o a variety of tools o standard decimal notation • Count forward by tenths from any decimal tenths number using concrete materials and number lines 	<p>Represent, Compare and Order Numbers 0.01 to 100 000</p> <ul style="list-style-type: none"> • Represent, compare, and order decimal hundredths up to 100 000 using: <ul style="list-style-type: none"> o a variety of tools o standard decimal notation • Count forward by hundredths from any decimal hundredths number using concrete materials and number lines 	<p>Represent, Compare and Order Numbers 0.001 to 1 000 000</p> <ul style="list-style-type: none"> • Represent, compare, and order decimal thousandths up to one million using: <ul style="list-style-type: none"> o a variety of tools o standard decimal notation 		

TIPS4Math Grades 1 to 8 Summary

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
<p>Addition and Subtraction Problems with Sums to 20</p> <ul style="list-style-type: none"> • Add, subtract and identify strategies • Solve a variety of problems that involve addition and/or subtraction 	<p>Addition and Subtraction Problems with Sums to 100</p> <ul style="list-style-type: none"> • Add, subtract and identify strategies • Solve a variety of problems that involve addition and/or subtraction • Make connections between student-generated and standard algorithms 	<p>Addition and Subtraction Problems with Sums to 1000</p> <ul style="list-style-type: none"> • Add, subtract and identify strategies • Solve a variety of problems that involve addition and/or subtraction • Make connections between student-generated and standard algorithms 	<p>Operations Involving Numbers 0.1 to 10 000</p> <ul style="list-style-type: none"> • Add and subtract decimal tenths and whole numbers up to a sum of 10 000 • Divide, resulting in tenths solutions: <ul style="list-style-type: none"> o 2-digit by 1-digit whole numbers o whole numbers by 10 or 100 • Solve problems involving addition, subtraction, and division 	<p>Operations Involving Numbers 0.01 to 100 000</p> <ul style="list-style-type: none"> • Multiply and divide decimal numbers by base 10 resulting in hundredths solutions • Solve problems involving addition, subtraction, multiplication, and division of whole and decimal numbers within the defined parameters for operations <ul style="list-style-type: none"> o measurement including conversions o money 	<p>Operations Involving Numbers 0.001 to 1 000 000</p> <ul style="list-style-type: none"> • Add and subtract decimal thousandths and whole numbers up to a sum of 1 million • Solve problems involving addition and subtraction of whole and decimal numbers • Multiply and divide decimal numbers by powers of ten • Multiply whole numbers by 0.1, 0.01 and 0.001 	<p>Operations Involving Integers</p> <ul style="list-style-type: none"> • Add and subtract using a variety of tools • Make connections between the addition and subtraction of integers • Solve problems involving addition and subtraction of integers 	<p>Operations Involving Integers</p> <ul style="list-style-type: none"> • Make connections between: <ul style="list-style-type: none"> o multiplication and repeated addition or patterns o division and repeated subtraction or patterns • Multiply and divide integers using a variety of tools • Solve problems involving operations with integers • Evaluate algebraic expressions involving integers using order of operation • Solve linear equations involving integers
<p>Compare and Order Numbers to 50</p> <ul style="list-style-type: none"> • Estimate quantities • Compare and order numbers to 50 based on quantity • Compare and order numbers to 50 using a number line 	<p>Multiplication and Division with Products to 50</p> <ul style="list-style-type: none"> • Decompose numbers into groups of equal size • Investigate combining equal groups (multiplication) • Investigate partitioning into equal groups (division) • Investigate division as equal sharing <ul style="list-style-type: none"> o finding the number of items in a group o finding the number of groups for a set of items 	<p>Multiplication and Division Problems</p> <ul style="list-style-type: none"> • Solve multiplication problems (up to 7×7) and division problems (up to $49 \div 7$) involving: <ul style="list-style-type: none"> o groups of equal quantity o product or quotient of measures o scale factor o combinations 					

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
<p>Linear Measurement Involving Numbers to 100 – Non-Standard Units and Metre</p> <ul style="list-style-type: none"> Review principles of linear measuring Measure and record using non-standard units Investigate the relationship between size and number of units Construct tools to measure in non-standard units Establish the metre as a benchmark for linear 	<p>Linear Measurement Involving Numbers to 200 – Standard Units</p> <ul style="list-style-type: none"> Relate the metre to non-standard units of measure Develop personal referents for the metre and centimetre Estimate, measure and record linear measures using metres and centimetres 	<p>Linear Measurement Involving Numbers to 1000 – Standard Units</p> <ul style="list-style-type: none"> Investigate the relationship between centimetres, metres, and kilometres Estimate, measure, record, and draw using centimetres Estimate, measure, and record using metres and kilometres Compare and order linear measures using the same standard unit (cm, m, km) Solve linear measurement problems using: <ul style="list-style-type: none"> different units the same unit 	<p>Perimeter and Area Involving Decimal Tenths</p> <ul style="list-style-type: none"> Estimate, measure and record perimeter and area of polygons involving decimals using a variety of tools <ul style="list-style-type: none"> select and justify the most appropriate unit of measure Solve perimeter and area problems involving addition, subtraction, multiplication, and division of whole and decimal numbers within the defined parameters for operations 	<p>Perimeter and Area Applications</p> <ul style="list-style-type: none"> Solve problems that require distinguishing between perimeter and area Solve perimeter and area problems involving household projects and design that involve: <ul style="list-style-type: none"> conversions variables as changing quantities 			
<p>Fractions – Equal Partitioning Including Thirds</p> <ul style="list-style-type: none"> Explore fractions through the equal partitioning of a variety of models into halves, thirds, and fourths Identify, name and count unit fractions 	<p>Represent and Compare Fractions</p> <ul style="list-style-type: none"> Represent and compare fractions by equally partitioning a whole into halves, thirds, fourths, and eighths using a variety of models Identify, name, and count unit fractions beyond a whole Compose wholes using unit fractions 	<p>Represent Fractions Relative to Other Fractions</p> <ul style="list-style-type: none"> Represent fractions by equally partitioning a whole into halves, thirds, fourths, fifths, and eighths using a variety of models Identify and name any fraction, including beyond a whole, relative to its unit fraction Identify and represent a fraction between two fractions of the same unit (denominator) and different units (denominators) to make sense of the relative size of the fraction as a number 	<p>Fractions and Decimal Tenths Relationships</p> <ul style="list-style-type: none"> Represent fractions and decimal tenths using a variety of models to explore equivalency 	<p>Fractions and Decimal Hundredths Relationships</p> <ul style="list-style-type: none"> Represent fractions and decimal hundredths using a variety of models to explore equivalency Investigate and solve problem involving the multiplicative relationship between fractions and decimals 	<p>Fractions, Decimals, Ratios and Percents</p> <ul style="list-style-type: none"> Explore benchmark percentages (10, 25, 50, 75, 100) relative to different wholes Investigate the relationships between percents, ratios, fractions, and decimal numbers 	<p>Fractions, Decimals, Percents, Ratios</p> <ul style="list-style-type: none"> Distinguish between ratio, rate, and unit rate Represent fractions, decimals, ratios, and percents in equivalent forms Select and justify the appropriate representation (ratio, rate, unit rate, fraction, decimal and/or percent) to solve problems Solve problems involving collecting, organizing and displaying data using frequency tables and circle graphs 	<p>Solve Problems involving Proportions</p> <ul style="list-style-type: none"> Solve problems involving: <ul style="list-style-type: none"> ratio tables scale factors proportions direct proportions rates percentages up to and over 100% Investigate similar shapes and solve problems that involve : <ul style="list-style-type: none"> solving for missing lengths solving for area

TIPS4Math Grades 1 to 8 Summary

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
<p>Probability</p> <ul style="list-style-type: none"> Relate probability to everyday events 	<p>Probability</p> <ul style="list-style-type: none"> Predict and determine the likelihood of: <ul style="list-style-type: none"> an event occurring one event to occur over another event Investigate probability through experiments/games by: <ul style="list-style-type: none"> identifying possible outcomes making predictions conducting trials displaying the data comparing the results to predictions 	<p>Probability</p> <ul style="list-style-type: none"> Investigate probability through experiments/games by: <ul style="list-style-type: none"> identifying possible outcomes predicting the frequency of outcomes conducting trials displaying the data comparing the results to predictions determining fairness 	<p>Probability</p> <ul style="list-style-type: none"> Investigate the impact on probability of changing the number of trials of an experiments by: <ul style="list-style-type: none"> creating probability experiments identifying possible outcomes predicting the frequency of outcomes conducting various numbers of trials displaying the data comparing the results to predictions judging reliability based on the number of trials 	<p>Probability</p> <ul style="list-style-type: none"> Determine all possible outcomes in probability experiments Record outcomes of an experiment as: <ul style="list-style-type: none"> frequency relative frequency expressed as a fraction Solve problems using probability and represent outcomes using fractions 	<p>Probability</p> <ul style="list-style-type: none"> Predict the outcome of an experiment expressed as the ratio of the number of favourable outcomes to the total number of possible outcomes <ul style="list-style-type: none"> relate this ratio to theoretical probability relate to its corresponding fraction, decimal and percentage forms Represent the probability of an event using a value from 0 to 1 	<p>Probability</p> <ul style="list-style-type: none"> Research and report on probability in the real world Make predictions about a population when given a probability expressed in a variety of forms Perform experiments/simulations involving two independent events comparing experimental and theoretical probability 	<p>Probability</p> <ul style="list-style-type: none"> Reason about possible discrepancies between theoretical and experimental probability Make connections between the probability of an event occurring and not occurring (complementary) Carry out experiments and solve problems related to: <ul style="list-style-type: none"> experimental probability theoretical probability complementary events
<p>Time</p> <ul style="list-style-type: none"> Investigate time across the year involving: <ul style="list-style-type: none"> months (in order) dates on a calendar (using ordinals) Establish consistent non-standard units of time Measure time intervals using non-standard units of time Tell and write time to the hour and half-hour using digital and analogue clocks 	<p>Time</p> <ul style="list-style-type: none"> Investigate the relationship between: <ul style="list-style-type: none"> months and years days and weeks Construct tools to measure non-standard units of time Measure time intervals using constructed tools Tell and write time to the quarter-hour using digital and analogue clocks 	<p>Time</p> <ul style="list-style-type: none"> Investigate the relationships between: <ul style="list-style-type: none"> days, weeks, and years hours and days minutes and hours Tell and write time to five minute intervals using digital and analogue clocks 	<p>Time</p> <ul style="list-style-type: none"> Solve problems involving relationships and converting between: <ul style="list-style-type: none"> years and decades decades and centuries Estimate, measure and represent time intervals to the nearest minute (analogue) Estimate and determine elapsed time in a variety of ways including to the nearest five- minute intervals 	<p>Time</p> <ul style="list-style-type: none"> Solve problems involving relationships between 12- and 24-hour clocks Estimate, measure, and represent time intervals to the nearest second (analogue) Estimate and determine elapsed time in a variety of ways including to the nearest one-minute intervals 			

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
<p>Money</p> <ul style="list-style-type: none"> Identify and describe coins Represent money amounts up to 20 cents Add, subtract, and solve problems with money amounts to 10 cents 	<p>Money</p> <ul style="list-style-type: none"> Estimate, count, represent, compare and order money to a maximum of 100 cents Add, subtract, and solve problems with money amounts to a maximum of 100 cents 	<p>Money</p> <ul style="list-style-type: none"> Estimate, count, and represent money: <ul style="list-style-type: none"> whole dollar amounts to a maximum of \$10 cents to a maximum of 1000 cents dollars and cents to a maximum of \$10 Add and subtract money to a maximum of \$10 Perform simulated purchases and make change for amounts up to \$10 	<p>Money</p> <ul style="list-style-type: none"> Read and represent money amounts to \$100 Add and subtract money amounts to \$100 Perform simulated purchases and make change for amounts up to \$100 				
<p>Temperature</p> <ul style="list-style-type: none"> Relate temperature to experiences of the seasons Compare the temperature of objects using relative language Collect, organize, display, read, and describe temperature data using relative categories (e.g., warm) in/from prepared templates, concrete graphs, or pictographs Pose and answer questions about relative temperatures 	<p>Temperature</p> <ul style="list-style-type: none"> Describe how changes in temperature affect everyday experiences Use a standard thermometer to determine if temperature is rising or falling Collect, organize, display, and read data related to the change in temperature in/from bar graphs Pose and answer questions about temperature change 	<p>Temperature</p> <ul style="list-style-type: none"> Estimate, read and record positive temperatures to the nearest degree Celsius Identify temperature benchmarks as they relate to air and to water Display and read temperature data in/from bar graphs Identify mode Pose and answer questions about the temperature data 		<p>Temperature</p> <ul style="list-style-type: none"> Measure and record temperatures to determine and represent change over time Display and read temperature data in/from a variety of graphs Calculate mean temperature and compare to other data sets Analyse temperature trends 			