

**Mathematics DRAFT Kindergarten to Grade 4 Curriculum**

	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4
<b>Essential Understanding</b>	<b>Organizing and representing quantitative information develops additive and multiplicative thinking to make meaningful connections and support problem solving.</b>				
<b>Guiding Questions</b>	<b>How can we represent quantities in everyday life with numbers?</b>	<b>How can we represent quantities with numbers?</b>	<b>How can we represent and interpret quantities with numbers?</b>	<b>How can we represent and interpret numbers?</b>	<b>How can we interpret and express numbers?</b>
<b>Learning Outcomes</b>	<b>Children make meaning of quantities within 10.</b>	<b>Students make meaning of and represent quantities within 100.</b>	<b>Students make meaning of and represent quantities within 200.</b>	<b>Students interpret and represent whole numbers within 1000.</b>	<b>Students interpret and express whole numbers within 10 000.</b>
<b>Conceptual Knowledge</b>	<ul style="list-style-type: none"> <li>quantity is “how many”</li> <li>the purpose of counting is to determine how many (quantify)</li> <li>quantities can be represented in many ways</li> <li>each object is counted once and only once (one-to-one correspondence)</li> <li>the order of words used to count never changes (stable order)</li> <li>the last number used to count represents the number of objects (cardinality)</li> <li>the count stays the same regardless of the order in which the objects are counted (order irrelevance)</li> <li>anything can be counted (abstraction principle)</li> </ul>	<ul style="list-style-type: none"> <li>the purpose of counting is to determine how many (quantify)</li> <li>quantities can be represented in many ways, including coins and bills</li> <li>quantities can be represented symbolically, including “none” represented by 0</li> <li>when counting, a quantity includes all of the previous numbers (hierarchical inclusion)</li> <li>the count stays the same no matter how the objects are arranged (conservation of number)</li> </ul>	<ul style="list-style-type: none"> <li>the position of a digit in a number determines its value (place value)</li> <li>grouping by 10 creates patterns in place value (unitizing) to make working with numbers efficient</li> <li>skip counting is an efficient way of counting larger quantities and can include quantities left over (remainders)</li> <li>numbers, including 0, occupy space in a visual or spatial representation of quantity</li> <li>numbers, including 0, can be associated with a specific point on a linear representation of quantity</li> <li>the position of something can be indicated using ordinal numbers</li> <li>quantities can be represented symbolically with numerals, including 0</li> <li>estimation is used when an exact count is not needed</li> </ul>	<ul style="list-style-type: none"> <li>place value and unitizing applies to larger numbers</li> <li>place value is the basis for the base-ten number system</li> <li>estimation can be applied to larger numbers</li> <li>there are patterns in how numbers are named and represented symbolically</li> <li>a visual or spatial representation of quantity can be extended to include larger numbers, up to 1000, and does not have to start at 0</li> </ul>	<ul style="list-style-type: none"> <li>each place value is 10 times the value of the place to its right</li> <li>estimation can be applied to larger numbers</li> <li>there are patterns in how numbers are named and represented symbolically (International System of Units (SI) representation)</li> <li>a visual or spatial representation of quantity can be extended to include large numbers and does not have to start at 0</li> </ul>
<b>Procedural Knowledge</b>	<ul style="list-style-type: none"> <li>demonstrate early counting principles, including one-to-one correspondence, stable order, cardinality, order irrelevance, and abstraction</li> <li>count within 10, forward and backward, starting at any number</li> <li>relate a numeral, 1 to 10, to a specific quantity</li> <li>explore different ways to represent whole numbers less than or equal to 10</li> <li>build (compose) and break apart (decompose) quantities to 10 concretely</li> <li>recognize at a glance the quantity in patterned and non-patterned sets to 5 (perceptual subitizing)</li> </ul>	<ul style="list-style-type: none"> <li>demonstrate early counting principles, including one-to-one correspondence, stable order, cardinality, conservation of number, hierarchical inclusion, order irrelevance, and abstraction</li> <li>count within 100, forward by 1, starting at any number</li> <li>count backward from 20 to 0 by 1</li> <li>skip count to 100, forward by 5 and 10, starting at 0</li> <li>skip count to 20, forward by 2, starting at 0</li> <li>relate a numeral to a specific quantity</li> <li>represent quantities concretely, including with coins and bills</li> <li>represent quantities pictorially and symbolically</li> <li>recognize the quantity in patterned and non-patterned sets to 10 (conceptual subitizing)</li> </ul>	<ul style="list-style-type: none"> <li>decompose numbers using standard form (place value) and non-standard form</li> <li>skip count forward and backward by 2, 5, and 10, starting at multiples of 2, 5, and 10 respectively</li> <li>skip count forward by 20 and 25, starting at 0</li> <li>determine the monetary value of collections of coins or bills (cents or dollars) of the same denomination</li> <li>skip count sets, including those with remainders</li> <li>order numbers using benchmarks on a visual or spatial representation</li> <li>represent quantities with numbers</li> <li>relate a numeral to a specific quantity</li> <li>estimate quantities using referents</li> </ul>	<ul style="list-style-type: none"> <li>skip count forward and backward by 2, 5, 10, and 100, starting at any number</li> <li>recognize patterns created by skip counting</li> <li>count and record the monetary value of collections of coins or bills (limited to either cents or dollars) of varying denominations</li> <li>estimate quantities using referents</li> <li>recognize and represent numbers</li> <li>order numbers using benchmarks on a visual or spatial representation</li> </ul>	<ul style="list-style-type: none"> <li>skip count by place value</li> <li>estimate quantities using referents</li> <li>recognize and represent quantities with numbers</li> <li>order numbers using benchmarks on a visual or spatial representation</li> </ul>

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	<b>Kindergarten</b>	<b>Grade 1</b>	<b>Grade 2</b>	<b>Grade 3</b>	<b>Grade 4</b>
<b>Competencies</b>	<ul style="list-style-type: none"> <li>Managing Information</li> <li>Critical Thinking</li> </ul>	<ul style="list-style-type: none"> <li>Critical Thinking</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Critical Thinking</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Critical Thinking</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Critical Thinking</li> <li>Communication</li> </ul>
<b>Literacy</b>	<ul style="list-style-type: none"> <li>Conventions</li> <li>Vocabulary</li> <li>Comprehension Strategies</li> </ul>	<ul style="list-style-type: none"> <li>Conventions</li> <li>Vocabulary</li> <li>Comprehension Strategies</li> </ul>	<ul style="list-style-type: none"> <li>Conventions</li> <li>Vocabulary</li> <li>Comprehension Strategies</li> </ul>	<ul style="list-style-type: none"> <li>Conventions</li> <li>Vocabulary</li> <li>Comprehension Strategies</li> </ul>	<ul style="list-style-type: none"> <li>Conventions</li> <li>Vocabulary</li> <li>Comprehension Strategies</li> </ul>
<b>Numeracy</b>	<ul style="list-style-type: none"> <li>Purpose</li> <li>Magnitude</li> <li>Using Numbers</li> <li>Interpretation and Representation of Quantitative Information</li> <li>Estimation</li> <li>Methods or Tools</li> </ul>	<ul style="list-style-type: none"> <li>Purpose</li> <li>Magnitude</li> <li>Using Numbers</li> <li>Patterns and Relationships</li> <li>Interpretation and Representation of Quantitative Information</li> <li>Estimation</li> </ul>	<ul style="list-style-type: none"> <li>Magnitude</li> <li>Using Numbers</li> <li>Patterns and Relationships</li> <li>Interpretation and Representation of Quantitative Information</li> <li>Interpretation and Representation of Spatial Information</li> <li>Estimation</li> </ul>	<ul style="list-style-type: none"> <li>Magnitude</li> <li>Using Numbers</li> <li>Patterns and Relationships</li> <li>Interpretation and Representation of Quantitative Information</li> <li>Interpretation and Representation of Spatial Information</li> <li>Estimation</li> </ul>	<ul style="list-style-type: none"> <li>Magnitude</li> <li>Using Numbers</li> <li>Patterns and Relationships</li> <li>Interpretation and Representation of Quantitative Information</li> <li>Interpretation and Representation of Spatial Information</li> <li>Estimation</li> </ul>
<b>Learning Outcomes</b>		<b>Students make meaning of one-half in familiar contexts.</b>	<b>Students make meaning of halves and quarters in familiar contexts.</b>	<b>Students make meaning of and represent part-to-whole relationships expressed as fractions.</b>	<b>Students demonstrate how part-to-whole relationships are expressed as fractions and decimals.</b>
<b>Conceptual Knowledge</b>		<ul style="list-style-type: none"> <li>objects and sets can be split (partitioned) into two equal-sized parts (halves)</li> </ul>	<ul style="list-style-type: none"> <li>objects and sets can be partitioned into equal-sized parts in different ways</li> <li>the part is related to the whole (part-to-whole relationship)</li> </ul>	<ul style="list-style-type: none"> <li>fractions are numbers used to represent part-to-whole relationships</li> <li>fraction notation shows the relationship between the whole (denominator) and the number of parts (numerator)</li> <li>fractions occupy space in a visual or spatial representation of quantity</li> <li>a fraction can be associated with a specific point on a linear representation of quantity</li> </ul>	<ul style="list-style-type: none"> <li>fractions are numbers used to represent part-to-whole relationships</li> <li>decimals are numbers used to represent part-to-whole relationships</li> <li>the same part-to-whole relationship can be represented with fractions with different denominators (equivalent fractions)</li> <li>the same part-to-whole relationship can be represented with a fraction and a decimal</li> <li>place value patterns extend to decimals</li> <li>fractions and decimals occupy space in a visual or spatial representation of quantity</li> <li>a fraction or a decimal can be associated with a specific point on a linear representation of quantity</li> </ul>
<b>Procedural Knowledge</b>		<ul style="list-style-type: none"> <li>split (partition) a set of objects into two equal groups</li> <li>split (partition) an object into two equal-sized pieces</li> </ul>	<ul style="list-style-type: none"> <li>count by halves and quarters to one whole concretely or pictorially</li> <li>partition objects and sets into halves and quarters</li> <li>describe part-to-whole relationships with halves and quarters</li> </ul>	<ul style="list-style-type: none"> <li>partition a set, a length, and an area to create halves, thirds, quarters, fifths, and tenths</li> <li>represent fractions symbolically</li> <li>compare different unit fractions from the same set, length, and area</li> <li>count by unit fractions to build one whole, limited to <math>\frac{1}{2}</math>, <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math>, and <math>\frac{1}{10}</math></li> <li>determine the location of a unit fraction on a linear representation of a whole</li> </ul>	<ul style="list-style-type: none"> <li>relate fractions and decimals, limited to tenths</li> <li>represent decimals concretely, pictorially, or symbolically, limited to tenths</li> <li>make meaning of equivalent fractions concretely or pictorially, limited to denominators of 10 or less</li> <li>count beyond 1 using improper fractions, limited to the same denominator</li> <li>count beyond 1 using decimals, limited to tenths</li> <li>compare fractions and decimals to the benchmarks of 0, <math>\frac{1}{2}</math>, and 1</li> </ul>

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					<ul style="list-style-type: none"> <li>determine the location of fractions and decimals on a linear representation of a whole</li> </ul>
<b>Competencies</b>		<ul style="list-style-type: none"> <li>Critical Thinking</li> <li>Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>Critical Thinking</li> <li>Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>Communication</li> <li>Critical Thinking</li> </ul>	<ul style="list-style-type: none"> <li>Communication</li> <li>Critical Thinking</li> </ul>
<b>Literacy</b>		<ul style="list-style-type: none"> <li>Background Knowledge</li> <li>Vocabulary</li> </ul>	<ul style="list-style-type: none"> <li>Background Knowledge</li> <li>Vocabulary</li> <li>Clarity</li> </ul>	<ul style="list-style-type: none"> <li>Conventions</li> <li>Vocabulary</li> <li>Text Organization</li> </ul>	<ul style="list-style-type: none"> <li>Conventions</li> <li>Vocabulary</li> <li>Text Organization</li> </ul>
<b>Numeracy</b>		<ul style="list-style-type: none"> <li>Purpose</li> <li>Magnitude</li> </ul>	<ul style="list-style-type: none"> <li>Purpose</li> <li>Magnitude</li> <li>Interpretation and Representation of Quantitative Information</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Magnitude</li> <li>Using Numbers</li> <li>Interpretation and Representation of Quantitative Information</li> <li>Interpretation and Representation of Spatial Information</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Magnitude</li> <li>Using Numbers</li> <li>Interpretation and Representation of Quantitative Information</li> <li>Interpretation and Representation of Spatial Information</li> <li>Communication</li> </ul>
<b>Guiding Questions</b>		<b>How can we compose and decompose quantities?</b>	<b>How can we compose and decompose numbers?</b>	<b>How can we flexibly compose and decompose numbers to solve problems?</b>	<b>How can we flexibly use additive thinking strategies to solve problems?</b>
<b>Learning Outcomes</b>		<b>Students represent composition and decomposition of quantities.</b>	<b>Students explore and apply additive thinking strategies.</b>	<b>Students represent and solve problems using additive thinking strategies.</b>	<b>Students solve problems using refined additive thinking strategies.</b>
<b>Conceptual Knowledge</b>		<ul style="list-style-type: none"> <li>addition and subtraction are operations used to compose and decompose numbers</li> <li>part-part-whole relationships can be represented using addition and subtraction</li> <li>two numbers can be added in any order (commutative property)</li> </ul>	<ul style="list-style-type: none"> <li>addition and subtraction are operations used when applying additive thinking strategies</li> <li>an addition situation can be represented as a subtraction situation (addition and subtraction are inverse operations)</li> <li>addition and subtraction are part-part-whole relationships that can be represented symbolically (+, -, =)</li> <li>numbers can be added in any order (commutative and associative properties)</li> </ul>	<ul style="list-style-type: none"> <li>additive thinking strategies can be applied to compose and decompose larger numbers</li> <li>unitizing is used for the purpose of regrouping in addition and subtraction</li> <li>when subtracting, the order of numbers is important</li> <li>problems can be solved in different ways</li> <li>strategies can be chosen based on the nature of the problem</li> <li>estimation can be used in problem-solving situations, including when an exact value is not needed or to verify a solution</li> <li>knowledge of single-digit addition and subtraction number facts is used to add and subtract larger numbers</li> </ul>	<ul style="list-style-type: none"> <li>additive thinking strategies can be applied to whole numbers and decimals</li> <li>problems can be solved in different ways</li> <li>strategies can be chosen based on the nature of the problem</li> <li>some strategies lend themselves to mental math</li> <li>strategies can be refined over time</li> <li>additive thinking strategies can be represented with step-by-step procedures (algorithms)</li> </ul>
<b>Procedural Knowledge</b>		<ul style="list-style-type: none"> <li>explore various ways to compose and decompose quantities</li> <li>explore patterns in addition and subtraction</li> <li>represent addition and subtraction strategies concretely, pictorially, or symbolically</li> <li>add and subtract in joining, separating, and comparing situations</li> </ul>	<ul style="list-style-type: none"> <li>apply strategies to single-digit addition number facts to a sum of 18 and related subtraction number facts</li> <li>represent addition and subtraction strategies concretely, pictorially, or symbolically</li> <li>add and subtract numbers within 100, including 0, without a calculator</li> </ul>	<ul style="list-style-type: none"> <li>apply concrete, pictorial, symbolic, or mental math strategies</li> <li>add and subtract in joining, separating, and comparing situations</li> <li>recognize reliability of a chosen strategy</li> <li>recall single-digit addition number facts to a sum of 18 and related subtraction number facts</li> </ul>	<ul style="list-style-type: none"> <li>refine concrete, pictorial, symbolic, or mental math strategies</li> <li>add and subtract in joining, separating, and comparing situations</li> <li>refine a chosen strategy</li> <li>add and subtract whole numbers within 10 000, including dollars, without a calculator</li> </ul>

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	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4
		<ul style="list-style-type: none"> <li>• add and subtract quantities within 20, including 0, without a calculator</li> <li>• recall single-digit addition number facts to a sum of 10 and related subtraction number facts</li> </ul>	<ul style="list-style-type: none"> <li>• recognize patterns in addition and subtraction</li> <li>• add and subtract in joining, separating, and comparing situations</li> <li>• create and solve problems that involve addition and subtraction</li> </ul>	<ul style="list-style-type: none"> <li>• add and subtract numbers within 1000, including 0, without a calculator</li> <li>• create and solve problems that involve addition and subtraction</li> <li>• estimate sums and differences as part of a problem-solving process</li> </ul>	<ul style="list-style-type: none"> <li>• add and subtract whole numbers to calculate totals within 100 cents without a calculator</li> <li>• express a preferred strategy for addition and subtraction of whole numbers in algorithmic form</li> <li>• add and subtract decimals, limited to tenths</li> <li>• create and solve problems that involve addition and subtraction</li> <li>• estimate sums and differences as part of a problem-solving process</li> </ul>
<b>Competencies</b>		<ul style="list-style-type: none"> <li>• Managing Information</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Critical Thinking</li> <li>• Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>• Problem Solving</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Problem Solving</li> <li>• Critical Thinking</li> </ul>
<b>Literacy</b>		<ul style="list-style-type: none"> <li>• Conventions</li> <li>• Vocabulary</li> <li>• Text Organization</li> </ul>	<ul style="list-style-type: none"> <li>• Conventions</li> <li>• Vocabulary</li> <li>• Text Organization</li> <li>• Comprehension Strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Conventions</li> <li>• Vocabulary</li> <li>• Text Organization</li> <li>• Comprehension Strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Text Organization</li> <li>• Comprehension Strategies</li> <li>• Clarity</li> </ul>
<b>Numeracy</b>		<ul style="list-style-type: none"> <li>• Calculations</li> <li>• Interpretation and Representation of Quantitative Information</li> <li>• Strategies</li> <li>• Methods or Tools</li> </ul>	<ul style="list-style-type: none"> <li>• Calculations</li> <li>• Patterns and Relationships</li> <li>• Interpretation and Representation of Quantitative Information</li> <li>• Strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Task Analysis</li> <li>• Calculations</li> <li>• Interpretation and Representation of Quantitative Information</li> <li>• Strategies</li> <li>• Estimation</li> <li>• Methods or Tools</li> </ul>	<ul style="list-style-type: none"> <li>• Personal Insight</li> <li>• Calculations</li> <li>• Interpretation and Representation of Quantitative Information</li> <li>• Strategies</li> <li>• Estimation</li> <li>• Methods or Tools</li> </ul>
<b>Guiding Questions</b>		<b>How can we share and group quantities in familiar contexts?</b>	<b>How can we share and group quantities?</b>	<b>How can we share and group with numbers?</b>	<b>How can we share and group flexibly to solve number problems?</b>
<b>Learning Outcomes</b>		<b>Students explore and represent sharing and grouping situations using quantities within 20.</b>	<b>Students make meaning of sharing and grouping situations using quantities within 60.</b>	<b>Students represent and apply multiplicative thinking strategies.</b>	<b>Students solve problems using refined multiplicative thinking strategies.</b>
<b>Conceptual Knowledge</b>		<ul style="list-style-type: none"> <li>• some quantities can be shared or grouped equally</li> <li>• the quantity stays the same no matter how the objects are grouped or shared (conservation of number)</li> </ul>	<ul style="list-style-type: none"> <li>• sharing and grouping situations can have quantities left over (remainders)</li> <li>• even quantities can be grouped by 2 with nothing left over</li> <li>• odd quantities can be grouped by 2 with 1 left over</li> </ul>	<ul style="list-style-type: none"> <li>• multiplication and division are operations used when applying multiplicative thinking strategies</li> <li>• multiplication and division involve a whole, a number of groups, and a quantity in each group</li> <li>• multiplication and division are sharing and grouping situations that can be represented symbolically (<math>\times</math>, <math>\div</math>, <math>=</math>)</li> <li>• a multiplication situation can be represented as a division situation (multiplication and division are inverse operations)</li> <li>• two numbers can be multiplied in any order (commutative property)</li> </ul>	<ul style="list-style-type: none"> <li>• multiplicative thinking strategies can be applied to larger numbers</li> <li>• numbers can be multiplied in any order (commutative and associative properties)</li> <li>• when dividing, the order of numbers is important</li> <li>• problems can be solved in different ways</li> <li>• strategies can be chosen based on the nature of the problem</li> <li>• some strategies lend themselves to mental math</li> <li>• strategies can be refined over time</li> <li>• estimation can be used in problem-solving situations, including when an exact value is not needed or to verify a solution</li> </ul>

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	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4
					<ul style="list-style-type: none"> <li>• division situations may or may not have remainders</li> </ul>
<b>Procedural Knowledge</b>		<ul style="list-style-type: none"> <li>• explore equal-sharing and equal-grouping situations concretely or pictorially</li> <li>• represent equal-sharing and equal-grouping situations concretely or pictorially</li> <li>• apply conservation of number when sharing or grouping</li> </ul>	<ul style="list-style-type: none"> <li>• represent sharing a set into a given number of groups, with or without remainders</li> <li>• represent sharing a set into groups of a given size, with or without remainders</li> <li>• group by twos to identify odd and even numbers</li> </ul>	<ul style="list-style-type: none"> <li>• represent multiplication and division strategies concretely, pictorially, or symbolically</li> <li>• explore patterns in multiplication and division</li> <li>• multiply and divide in sharing, grouping, array, and combination situations, with or without remainders</li> <li>• apply strategies to single-digit multiplication number facts for products to 81 and related division number facts</li> <li>• relate place value to multiplication by 10</li> <li>• multiply by 0</li> </ul>	<ul style="list-style-type: none"> <li>• refine concrete, pictorial, symbolic, or mental math strategies</li> <li>• recognize patterns in multiplication and division</li> <li>• multiply and divide in sharing, grouping, array, combination, area, and comparison (rate) situations, with or without remainders in context</li> <li>• refine a chosen strategy</li> <li>• recall single-digit multiplication number facts for products to 81 and related division number facts</li> <li>• multiply a 2- or 3-digit number by a 1-digit number, limited to whole numbers, concretely, pictorially, or symbolically, without a calculator</li> <li>• divide a 2-digit number by a 1-digit number, limited to whole numbers, concretely, pictorially, or symbolically, without a calculator</li> <li>• multiply or divide in parts (distributive property)</li> <li>• estimate products and quotients as part of a problem-solving process</li> </ul>
<b>Competencies</b>		<ul style="list-style-type: none"> <li>• Managing Information</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Critical Thinking</li> <li>• Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>• Critical Thinking</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Problem Solving</li> <li>• Critical Thinking</li> </ul>
<b>Literacy</b>		<ul style="list-style-type: none"> <li>• Conventions</li> </ul>	<ul style="list-style-type: none"> <li>• Conventions</li> <li>• Vocabulary</li> <li>• Comprehension Strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Conventions</li> <li>• Vocabulary</li> <li>• Text Organization</li> </ul>	<ul style="list-style-type: none"> <li>• Conventions</li> <li>• Text Organization</li> <li>• Comprehension Strategies</li> </ul>
<b>Numeracy</b>		<ul style="list-style-type: none"> <li>• Magnitude</li> <li>• Interpretation and Representation of Quantitative Information</li> </ul>	<ul style="list-style-type: none"> <li>• Magnitude</li> <li>• Interpretation and Representation of Quantitative Information</li> <li>• Strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Calculations</li> <li>• Patterns and Relationships</li> <li>• Interpretation and Representation of Quantitative Information</li> <li>• Strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Calculations</li> <li>• Patterns and Relationships</li> <li>• Interpretation and Representation of Quantitative Information</li> <li>• Strategies</li> <li>• Estimation</li> <li>• Methods or Tools</li> </ul>

## Mathematics DRAFT Kindergarten to Grade 4 Curriculum

	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4
<b>Essential Understanding</b>	<b>Visualizing and describing spatial relationships through geometry enhances interpretations of the physical world.</b>				
<b>Guiding Questions</b>	<b>Where do we find shapes in our world?</b>	<b>How can we compare shapes using attributes?</b>	<b>How can we identify shapes using geometric properties?</b>	<b>How can we classify and model shapes using geometric properties?</b>	<b>How can we analyze and describe shapes using geometric properties?</b>
<b>Learning Outcomes</b>	<b>Children explore and recognize shapes in their surroundings.</b>	<b>Students describe and compare shapes in the environment.</b>	<b>Students examine attributes and geometric properties when sorting and comparing shapes.</b>	<b>Students classify and create shapes using geometric properties.</b>	<b>Students analyze and visualize shapes using geometric properties.</b>
<b>Conceptual Knowledge</b>	<ul style="list-style-type: none"> <li>• 2-D and 3-D shapes can be found in our surroundings</li> <li>• size, colour, or number of sides can be used to describe shapes (attributes)</li> <li>• some 3-D shapes roll, stack, or slide</li> <li>• shapes can be combined together to create other shapes</li> </ul>	<ul style="list-style-type: none"> <li>• attributes are characteristics that can be used to compare, sort, and describe shapes</li> <li>• some shapes have matching halves (symmetry)</li> <li>• size and shape are not affected by orientation</li> </ul>	<ul style="list-style-type: none"> <li>• attributes are geometric properties when they are specific to a given shape</li> <li>• geometric properties, including sides, corners (vertices), faces, and edges, are mathematical characteristics used to sort 2-D and 3-D shapes</li> <li>• the faces of 3-D shapes are 2-D shapes</li> </ul>	<ul style="list-style-type: none"> <li>• geometric properties, including sides, vertices, faces, and edges, allow for classification of shapes</li> <li>• geometric properties determine whether a shape is a regular or an irregular polygon</li> </ul>	<ul style="list-style-type: none"> <li>• lines that are always the same distance apart (parallel lines) and lines that form an L shape (perpendicular lines) are geometric properties that help classify shapes</li> <li>• geometric properties, including parallel sides and faces, perpendicular sides and faces, and angles at vertices, allow for classification of shapes</li> </ul>
<b>Procedural Knowledge</b>	<ul style="list-style-type: none"> <li>• relate 2-D shapes, including squares, circles, rectangles, and triangles, to objects in our surroundings</li> <li>• sort familiar 2-D shapes by a single attribute and describe the sorting rule</li> <li>• explore rolling, stacking, and sliding attributes of 3-D shapes</li> <li>• compose and decompose composite 2-D shapes</li> </ul>	<ul style="list-style-type: none"> <li>• sort 2-D shapes, including squares, circles, rectangles, and triangles, and 3-D shapes, including cubes, cones, cylinders, and spheres, by a single attribute and describe the sorting rule</li> <li>• relate the attributes of 2-D and 3-D shapes to objects in the environment</li> <li>• describe 2-D and 3-D shapes in varying orientations</li> <li>• compose and decompose composite 2-D shapes</li> <li>• explore symmetry concretely</li> </ul>	<ul style="list-style-type: none"> <li>• determine whether attributes are geometric properties</li> <li>• sort 2-D shapes, including triangles, quadrilaterals, pentagons, hexagons, and octagons, and 3-D shapes, including cubes, cones, cylinders, spheres, and pyramids, by one or two attributes and describe the sorting rule</li> <li>• describe 2-D and 3-D shapes in varying orientations</li> <li>• identify 2-D shapes in composite 2-D shapes and designs</li> <li>• relate the faces of 3-D shapes to 2-D shapes</li> <li>• compose and decompose composite 3-D shapes</li> </ul>	<ul style="list-style-type: none"> <li>• sort 2-D and 3-D shapes by one or two geometric properties and describe the sorting rule</li> <li>• describe regular and irregular polygons, including triangles, quadrilaterals, pentagons, hexagons, and octagons, in varying orientations</li> <li>• replicate composite 2-D and 3-D shapes from verbal instructions, visualization, or memory</li> <li>• model 3-D shapes, including cubes and pyramids, concretely</li> <li>• identify 3-D shapes from different views</li> </ul>	<ul style="list-style-type: none"> <li>• classify quadrilaterals according to geometric properties</li> <li>• describe 3-D shapes, including right rectangular prisms and right triangular prisms, according to geometric properties</li> <li>• model 3-D shapes, including right rectangular prisms and right triangular prisms, concretely</li> </ul>
<b>Competencies</b>	<ul style="list-style-type: none"> <li>• Critical Thinking</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Critical Thinking</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Critical Thinking</li> <li>• Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>• Critical Thinking</li> <li>• Creativity and Innovation</li> </ul>	<ul style="list-style-type: none"> <li>• Critical Thinking</li> </ul>
<b>Literacy</b>	<ul style="list-style-type: none"> <li>• Vocabulary</li> <li>• Clarity</li> </ul>	<ul style="list-style-type: none"> <li>• Vocabulary</li> <li>• Comprehension Strategies</li> <li>• Clarity</li> </ul>	<ul style="list-style-type: none"> <li>• Vocabulary</li> <li>• Comprehension Strategies</li> <li>• Clarity</li> </ul>	<ul style="list-style-type: none"> <li>• Access</li> <li>• Vocabulary</li> <li>• Clarity</li> </ul>	<ul style="list-style-type: none"> <li>• Vocabulary</li> <li>• Comprehension Strategies</li> <li>• Clarity</li> </ul>
<b>Numeracy</b>	<ul style="list-style-type: none"> <li>• Purpose</li> <li>• Organization of Data</li> <li>• Spatial Visualization</li> <li>• Interpretation and Representation of Spatial Information</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Purpose</li> <li>• Organization of Data</li> <li>• Spatial Visualization</li> <li>• Interpretation and Representation of Spatial Information</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Organization of Data</li> <li>• Spatial Visualization</li> <li>• Interpretation and Representation of Spatial Information</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Organization of Data</li> <li>• Spatial Visualization</li> <li>• Interpretation and Representation of Spatial Information</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Organization of Data</li> <li>• Spatial Visualization</li> <li>• Interpretation and Representation of Spatial Information</li> <li>• Communication</li> </ul>

**Mathematics DRAFT Kindergarten to Grade 4 Curriculum**

	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4
<b>Guiding Questions</b>			<b>How can we explore position and movement?</b>	<b>How can we express the movement of shapes?</b>	<b>How can we interpret the movement of shapes?</b>
<b>Learning Outcomes</b>			<b>Students explore and demonstrate the position and the movement of objects.</b>	<b>Students visualize and describe the movement of shapes.</b>	<b>Students analyze and demonstrate the transformation of shapes.</b>
<b>Conceptual Knowledge</b>			<ul style="list-style-type: none"> <li>slides and flips can describe the movement of objects</li> <li>moving an object does not change its shape or size</li> <li>slides and flips can be found in natural and created patterns</li> <li>symmetry can be created with a flip</li> </ul>	<ul style="list-style-type: none"> <li>slides (translations), flips (reflections), and turns (rotations) can describe the movement of shapes</li> <li>lines of symmetry allow for more precise descriptions of reflections</li> <li>2-D shapes are congruent if they have the same shape and size</li> <li>3-D shapes are congruent if they have the same shape and size</li> </ul>	<ul style="list-style-type: none"> <li>transformations, including translations, reflections, and rotations, can describe the movement of shapes</li> <li>directions, including up, down, left, right, clockwise, and counter-clockwise, can be used to describe transformations</li> <li>rotation is the basis of rotational symmetry in shapes</li> </ul>
<b>Procedural Knowledge</b>			<ul style="list-style-type: none"> <li>explore slides and flips concretely or pictorially</li> <li>recognize slides and flips in designs</li> <li>create 2-D symmetrical designs</li> <li>recognize that an object is the same size and shape after sliding or flipping</li> </ul>	<ul style="list-style-type: none"> <li>visualize a slide, flip, or turn and represent the result concretely or pictorially</li> <li>use slides, flips, or turns to match two congruent shapes</li> <li>describe a reflection using one line of symmetry</li> <li>identify 2-D shapes that have line symmetry</li> </ul>	<ul style="list-style-type: none"> <li>visualize a transformation and representing the result concretely or pictorially</li> <li>recognize congruency between the original and transformed shape</li> <li>describe transformations that match two congruent shapes</li> <li>explore rotational symmetry of 2-D shapes concretely</li> </ul>
<b>Competencies</b>			<ul style="list-style-type: none"> <li>Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>Critical Thinking</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Critical Thinking</li> <li>Communication</li> </ul>
<b>Literacy</b>			<ul style="list-style-type: none"> <li>Conventions</li> <li>Vocabulary</li> </ul>	<ul style="list-style-type: none"> <li>Conventions</li> <li>Vocabulary</li> <li>Comprehension Strategies</li> <li>Clarity</li> </ul>	<ul style="list-style-type: none"> <li>Vocabulary</li> <li>Comprehension Strategies</li> <li>Clarity</li> </ul>
<b>Numeracy</b>			<ul style="list-style-type: none"> <li>Patterns and Relationships</li> <li>Spatial Visualization</li> <li>Management of Space</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Spatial Visualization</li> <li>Management of Space</li> <li>Interpretation and Representation of Spatial Information</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Organization of Data</li> <li>Spatial Visualization</li> <li>Management of Space</li> <li>Interpretation and Representation of Spatial Information</li> <li>Communication</li> </ul>
<b>Guiding Questions</b>	<b>How can we compare objects?</b>	<b>How can we compare objects to measure?</b>	<b>How can we measure objects?</b>	<b>How can we use standard units to express a measurement?</b>	<b>How can we relate measurement to perimeter and area?</b>
<b>Learning Outcomes</b>	<b>Children compare familiar objects using length and mass.</b>	<b>Students compare length and mass of familiar objects using non-standard units.</b>	<b>Students compare and describe measures of objects using non-standard units.</b>	<b>Students describe and measure objects using standard units.</b>	<b>Students determine and express measures related to perimeter and area.</b>
<b>Conceptual Knowledge</b>	<ul style="list-style-type: none"> <li>objects can be compared and ordered according to length using words, including longer, taller, and shorter</li> <li>objects can be compared and ordered according to mass using words, including heavier and lighter</li> </ul>	<ul style="list-style-type: none"> <li>length and mass are attributes that can be measured (measurable attributes)</li> <li>objects can be measured using direct or indirect comparison</li> <li>measurable attributes can be compared using words, including longest, tallest, shortest, heaviest, and lightest</li> </ul>	<ul style="list-style-type: none"> <li>a single object may have multiple attributes that are measurable, including mass and length</li> <li>measuring is a process of comparing attributes using units and tools</li> </ul>	<ul style="list-style-type: none"> <li>measuring is a process of comparing attributes using units and tools</li> <li>centimetre, metre, gram, and kilogram are units in the International System of Units (SI)</li> <li>width, height, length, and perimeter are all linear measures</li> </ul>	<ul style="list-style-type: none"> <li>millimetre, centimetre, metre, square centimetre, and square metre are units in the International System of Units (SI)</li> <li>length, perimeter, and area are related measures</li> <li>area is the space inside a 2-D shape and is measured in square units</li> </ul>

**Mathematics DRAFT Kindergarten to Grade 4 Curriculum**

	<b>Kindergarten</b>	<b>Grade 1</b>	<b>Grade 2</b>	<b>Grade 3</b>	<b>Grade 4</b>
		<ul style="list-style-type: none"> <li>• a unit is used to compare measurable attributes</li> <li>• non-standard units must be identical for a count to represent the measure</li> </ul>	<ul style="list-style-type: none"> <li>• length is expressed by counting the total number of identical units without gaps or overlaps</li> </ul>	<ul style="list-style-type: none"> <li>• the measure of a length stays the same when repositioned or partitioned (conservation of number)</li> <li>• standard units enable a common language around measurement</li> </ul>	<ul style="list-style-type: none"> <li>• the area of a shape stays the same when repositioned or decomposed (conservation of number)</li> <li>• units of measure can be converted for efficiency in different contexts</li> </ul>
<b>Procedural Knowledge</b>	<ul style="list-style-type: none"> <li>• compare the length or mass of one object to another (direct comparison)</li> <li>• order familiar objects by length or mass</li> </ul>	<ul style="list-style-type: none"> <li>• order objects by length or mass using direct comparison</li> <li>• compare two objects indirectly using a third object (indirect comparison)</li> <li>• measure length using many copies of the same non-standard unit</li> </ul>	<ul style="list-style-type: none"> <li>• create a tool to measure length with non-standard units</li> <li>• select non-standard units to estimate, measure, and compare length and mass</li> <li>• measure length using non-standard units, either a single unit used repeatedly or many copies of the same unit</li> <li>• compare and order objects in more than one way using different measurable attributes</li> </ul>	<ul style="list-style-type: none"> <li>• select appropriate standard units and tools to measure, record, and compare length, width, height, and mass</li> <li>• select referents for the units centimetre, metre, gram, and kilogram to estimate length and mass</li> <li>• describe the relationship between centimetres and metres, grams and kilograms</li> <li>• add multiple lengths to determine the total length</li> <li>• estimate, measure, and record perimeter</li> </ul>	<ul style="list-style-type: none"> <li>• describe the relationship between millimetres, centimetres, and metres</li> <li>• justify the selection of units used for measurement</li> <li>• determine perimeter in different contexts</li> <li>• determine area by tiling inside a 2-D shape</li> <li>• estimate area using referents for square centimetre and square metre</li> </ul>
<b>Competencies</b>	<ul style="list-style-type: none"> <li>• Critical Thinking</li> <li>• Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>• Critical Thinking</li> <li>• Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>• Critical Thinking</li> <li>• Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>• Communication</li> <li>• Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>• Critical Thinking</li> <li>• Communication</li> </ul>
<b>Literacy</b>	<ul style="list-style-type: none"> <li>• Vocabulary</li> <li>• Comprehension Strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Vocabulary</li> <li>• Comprehension Strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Vocabulary</li> <li>• Comprehension Strategies</li> <li>• Clarity</li> </ul>	<ul style="list-style-type: none"> <li>• Conventions</li> <li>• Vocabulary</li> <li>• Comprehension Strategies</li> <li>• Clarity</li> </ul>	<ul style="list-style-type: none"> <li>• Conventions</li> <li>• Vocabulary</li> <li>• Comprehension Strategies</li> <li>• Clarity</li> </ul>
<b>Numeracy</b>	<ul style="list-style-type: none"> <li>• Organization of Data</li> <li>• Measurement</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Organization of Data</li> <li>• Measurement</li> <li>• Units of Measurement</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Measurement</li> <li>• Units of Measurement</li> <li>• Communication</li> <li>• Strategies</li> <li>• Methods or Tools</li> </ul>	<ul style="list-style-type: none"> <li>• Measurement</li> <li>• Units of Measurement</li> <li>• Communication</li> <li>• Strategies</li> <li>• Estimation</li> <li>• Methods or Tools</li> </ul>	<ul style="list-style-type: none"> <li>• Measurement</li> <li>• Units of Measurement</li> <li>• Conversions</li> <li>• Interpretation and Representation of Spatial Information</li> <li>• Communication</li> <li>• Estimation</li> <li>• Methods or Tools</li> </ul>



## Mathematics DRAFT Kindergarten to Grade 4 Curriculum

	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4
<b>Essential Understanding</b>	<b>Exploring connections strengthens our understandings of relationships to help us make meaning of the world.</b>				
<b>Guiding Questions</b>	<b>How can we describe the relationships between quantities?</b>	<b>How can we represent relationships between quantities?</b>	<b>How can we represent equal and not equal relationships between quantities?</b>	<b>How can we create equations to represent relationships between quantities?</b>	<b>How can we represent situations using equations with unknowns?</b>
<b>Learning Outcomes</b>	<b>Children explore and communicate the relationship between quantities.</b>	<b>Students demonstrate equality as a relationship between quantities.</b>	<b>Students represent quantities as equal or not equal.</b>	<b>Students create and solve equations that represent quantitative relationships.</b>	<b>Students create and solve equations that represent problem-solving situations.</b>
<b>Conceptual Knowledge</b>	<ul style="list-style-type: none"> <li>quantities can be the same or not the same</li> <li>quantities can be more or less</li> </ul>	<ul style="list-style-type: none"> <li>equality is a relationship between quantities</li> <li>equality can be represented symbolically (=)</li> <li>quantity stays the same no matter how objects are arranged (conservation of number)</li> </ul>	<ul style="list-style-type: none"> <li>equality and inequality are relationships between quantities</li> <li>equality and inequality can be represented symbolically (= and <math>\neq</math>)</li> </ul>	<ul style="list-style-type: none"> <li>equations are representations of equality between two expressions</li> <li>an equal sign indicates a relationship of equality between two expressions</li> <li>symbols are used to represent unknown values (unknowns) in equations</li> </ul>	<ul style="list-style-type: none"> <li>situations or problems can be generalized and represented with equations</li> <li>equations can be solved to find unknown values</li> <li>symbols are used to represent unknowns in equations</li> </ul>
<b>Procedural Knowledge</b>	<ul style="list-style-type: none"> <li>explore same, not same, more, and less concretely or pictorially</li> <li>describe the relationships between quantities using same, not same, more, or less</li> </ul>	<ul style="list-style-type: none"> <li>represent equality concretely or pictorially</li> <li>record equalities using the equal sign (=)</li> </ul>	<ul style="list-style-type: none"> <li>represent equality and inequality concretely or pictorially</li> <li>record equalities and inequalities symbolically</li> <li>change an inequality into an equality concretely or pictorially</li> </ul>	<ul style="list-style-type: none"> <li>create a one-step equation with one unknown value</li> <li>solve equations with addition and subtraction concretely, pictorially, or symbolically</li> </ul>	<ul style="list-style-type: none"> <li>create an equation with an unknown value to represent a problem or situation</li> <li>create a problem for a given equation</li> <li>solve equations concretely, pictorially, or symbolically</li> </ul>
<b>Competencies</b>	<ul style="list-style-type: none"> <li>Critical Thinking</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Critical Thinking</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Critical Thinking</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Creativity and Innovation</li> <li>Problem Solving</li> </ul>	<ul style="list-style-type: none"> <li>Creativity and Innovation</li> <li>Problem Solving</li> </ul>
<b>Literacy</b>	<ul style="list-style-type: none"> <li>Vocabulary</li> <li>Clarity</li> </ul>	<ul style="list-style-type: none"> <li>Conventions</li> <li>Vocabulary</li> </ul>	<ul style="list-style-type: none"> <li>Conventions</li> <li>Vocabulary</li> </ul>	<ul style="list-style-type: none"> <li>Conventions</li> <li>Vocabulary</li> </ul>	<ul style="list-style-type: none"> <li>Conventions</li> <li>Comprehension Strategies</li> </ul>
<b>Numeracy</b>	<ul style="list-style-type: none"> <li>Magnitude</li> <li>Interpretation and Representation of Quantitative Information</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Magnitude</li> <li>Interpretation and Representation of Quantitative Information</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Magnitude</li> <li>Interpretation and Representation of Quantitative Information</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Calculations</li> <li>Interpretation and Representation of Quantitative Information</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Calculations</li> <li>Interpretation and Representation of Quantitative Information</li> <li>Communication</li> </ul>
<b>Guiding Questions</b>	<b>How can we explore relationships between pattern elements?</b>	<b>How can we express relationships between pattern elements?</b>	<b>How can we express patterns in different ways?</b>	<b>How can we use patterns to make predictions?</b>	<b>How can we use patterns to solve problems?</b>
<b>Learning Outcomes</b>	<b>Children explore and describe the relationship between elements in a repeating pattern.</b>	<b>Students describe relationships among elements in a repeating pattern.</b>	<b>Students represent patterns in various ways.</b>	<b>Students analyze a pattern and determine the relationship that produces the pattern rule.</b>	<b>Students analyze a pattern and generalize the pattern rule when solving a problem.</b>
<b>Conceptual Knowledge</b>	<ul style="list-style-type: none"> <li>each part (element) of a pattern has attributes, including size, colour, and shape</li> <li>repeating patterns have a set of elements that repeat</li> <li>patterns can be described (pattern rule)</li> <li>patterns can be found everywhere</li> <li>patterns can be created using objects, images, symbols, sounds, or actions</li> </ul>	<ul style="list-style-type: none"> <li>patterns can be found in the environment</li> <li>patterns can be created using objects, images, symbols, sounds, or actions</li> <li>repeating patterns have a set of elements that repeat (pattern core)</li> <li>a repeating pattern can be represented in different ways</li> </ul>	<ul style="list-style-type: none"> <li>a pattern is a sequence that follows a rule</li> <li>repeating patterns have a pattern core</li> <li>increasing patterns change according to a rule</li> <li>patterns can be represented in different ways, including non-linear designs</li> <li>create repeating patterns with three to five elements in the pattern core</li> </ul>	<ul style="list-style-type: none"> <li>repetition and change can create increasing and decreasing patterns</li> <li>repetition and change can be described with a pattern rule</li> <li>rules allow for prediction beyond the information at hand</li> <li>create increasing patterns using addition and decreasing patterns using subtraction</li> </ul>	<ul style="list-style-type: none"> <li>repetition and change can create increasing and decreasing patterns that model problems</li> <li>repetition and change can be generalized to solve problems</li> <li>create patterns using addition, subtraction, multiplication, or division</li> </ul>

**Mathematics DRAFT Kindergarten to Grade 4 Curriculum**

	<b>Kindergarten</b>	<b>Grade 1</b>	<b>Grade 2</b>	<b>Grade 3</b>	<b>Grade 4</b>
<b>Procedural Knowledge</b>	<ul style="list-style-type: none"> <li>• identify examples and non-examples of patterns</li> <li>• describe patterns</li> <li>• reproduce, extend, and create repeating patterns with two or three elements</li> </ul>	<ul style="list-style-type: none"> <li>• describe patterns, including how patterns repeat</li> <li>• reproduce, extend, and create repeating patterns with two to four elements</li> <li>• translate a repeating pattern from one representation to another</li> </ul>	<ul style="list-style-type: none"> <li>• create an increasing pattern from a pattern rule</li> <li>• translate a pattern from one representation to another</li> </ul>	<ul style="list-style-type: none"> <li>• determine a rule for a given pattern</li> <li>• create a pattern from a given rule</li> <li>• predict the next step or part (term) of a pattern</li> </ul>	<ul style="list-style-type: none"> <li>• recognize when a pattern can be used to solve a problem</li> <li>• determine a pattern rule and apply it to a problem</li> </ul>
<b>Competencies</b>	<ul style="list-style-type: none"> <li>• Critical Thinking</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Critical Thinking</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Communication</li> <li>• Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>• Critical Thinking</li> <li>• Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>• Critical Thinking</li> <li>• Problem Solving</li> </ul>
<b>Literacy</b>	<ul style="list-style-type: none"> <li>• Conventions</li> <li>• Vocabulary</li> <li>• Text Organization</li> <li>• Clarity</li> </ul>	<ul style="list-style-type: none"> <li>• Vocabulary</li> <li>• Text Organization</li> <li>• Clarity</li> </ul>	<ul style="list-style-type: none"> <li>• Vocabulary</li> <li>• Text Organization</li> </ul>	<ul style="list-style-type: none"> <li>• Comprehension Strategies</li> <li>• Text Organization</li> </ul>	<ul style="list-style-type: none"> <li>• Comprehension Strategies</li> <li>• Text Organization</li> </ul>
<b>Numeracy</b>	<ul style="list-style-type: none"> <li>• Purpose</li> <li>• Patterns and Relationships</li> <li>• Organization of Data</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Patterns and Relationships</li> <li>• Organization of Data</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Patterns and Relationships</li> <li>• Organization of Data</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Calculations</li> <li>• Patterns and Relationships</li> <li>• Organization of Data</li> <li>• Probability</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Purpose</li> <li>• Calculations</li> <li>• Patterns and Relationships</li> <li>• Organization of Data</li> </ul>
<b>Guiding Questions</b>	<b>How can we explore the relationship between time and events?</b>	<b>How can we relate time to events?</b>	<b>How can we measure time and cycles in a variety of contexts?</b>	<b>How can we measure and communicate time and cycles?</b>	<b>How can we measure and communicate the passage of time?</b>
<b>Learning Outcome</b>	<b>Children explore and describe relationships between time and experiences.</b>	<b>Students describe relationships between time and experiences.</b>	<b>Students connect units of time to various representations.</b>	<b>Students relate time to clocks and cycles.</b>	<b>Students measure the passage of time with clocks and cycles.</b>
<b>Conceptual Knowledge</b>	<ul style="list-style-type: none"> <li>• events can be sequenced in time</li> <li>• time can be experienced through seasons</li> <li>• First Nations, Métis, and Inuit relate time to changes in nature</li> </ul>	<ul style="list-style-type: none"> <li>• events can be compared and sequenced in time</li> <li>• time can be experienced in cycles and patterns, including seasons</li> <li>• First Nations, Métis, and Inuit traditional cultural activities are connected to seasons</li> <li>• time can be measured</li> </ul>	<ul style="list-style-type: none"> <li>• a calendar can show relationships between months, weeks, and days</li> <li>• analog clocks show relationships between minutes and hours</li> <li>• First Nations, Métis, and Inuit recognize that patterns of the sun and moon provide a sense of time</li> <li>• personal referents for time can be used to estimate duration</li> </ul>	<ul style="list-style-type: none"> <li>• a clock is a tool for measuring time based on cycles</li> <li>• analog clocks show relationships between minutes and hours</li> <li>• digital clocks display hours and minutes</li> <li>• there are relationships between analog and digital clocks</li> <li>• First Nations, Métis, and Inuit relate time to human life cycles and seasons</li> <li>• units of time are selected according to context</li> </ul>	<ul style="list-style-type: none"> <li>• there is a relationship between a 12-hour clock and a 24-hour clock</li> <li>• the second is the International System of Units (SI) base unit for time</li> <li>• there are relationships between seconds, minutes, and hours</li> <li>• units of time can be converted for efficiency in different contexts</li> <li>• passage of time can be measured in various ways</li> <li>• First Nations, Métis, and Inuit communicate the passage of time by recording significant events within natural cycles</li> </ul>
<b>Procedural Knowledge</b>	<ul style="list-style-type: none"> <li>• describe a sequence of events using time vocabulary in familiar contexts, including before, after, then, next, and a long time ago</li> <li>• connect lived experiences and cultural events to time</li> <li>• explore how seasons are cycles of time</li> </ul>	<ul style="list-style-type: none"> <li>• describe a sequence of events using time vocabulary in familiar contexts, including yesterday, today, tomorrow, morning, afternoon, evening, past, present, and future</li> <li>• connect lived experiences and cultural events to time</li> </ul>	<ul style="list-style-type: none"> <li>• relate personal or cultural events to a date on a calendar</li> <li>• compare days to weeks and months to years</li> <li>• relate units of time on a clock, including minutes to quarter-hour, half-hour, and hour</li> </ul>	<ul style="list-style-type: none"> <li>• read and record time to the hour, half-hour, and quarter-hour using analog clocks</li> <li>• relate digital clock time to analog clock time</li> <li>• relate time to seasonal and human life cycles, including First Nations’ medicine wheels</li> </ul>	<ul style="list-style-type: none"> <li>• measure time in relation to seasons and events, including First Nations’ winter counts, and other traditional knowledge</li> <li>• read and record time using digital and analog clocks, including 24-hour clocks</li> <li>• calculate elapsed time in hours and minutes</li> </ul>

## Mathematics DRAFT Kindergarten to Grade 4 Curriculum

	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4
		<ul style="list-style-type: none"> <li>• explore cultural stories of First Nations, Métis, and Inuit that describe traditional activities in relation to seasons</li> <li>• estimate and measure time using non-standard units</li> <li>• compare the duration of activities</li> </ul>	<ul style="list-style-type: none"> <li>• connect sun and moon patterns to time references, including cycles of day and night</li> <li>• compare events of different durations using non-standard units</li> </ul>	<ul style="list-style-type: none"> <li>• select appropriate units of time based on context</li> <li>• compare events that have different durations using standard units</li> <li>• estimate the duration of an event using a referent</li> </ul>	<ul style="list-style-type: none"> <li>• estimate duration for a sequence of familiar events</li> <li>• convert units of time, including hours to minutes and minutes to seconds</li> </ul>
<b>Competencies</b>	<ul style="list-style-type: none"> <li>• Communication</li> <li>• Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>• Communication</li> <li>• Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>• Communication</li> <li>• Critical Thinking</li> </ul>	<ul style="list-style-type: none"> <li>• Managing Information</li> <li>• Critical Thinking</li> </ul>	<ul style="list-style-type: none"> <li>• Managing Information</li> <li>• Critical Thinking</li> </ul>
<b>Literacy</b>	<ul style="list-style-type: none"> <li>• Background Knowledge</li> <li>• Vocabulary</li> <li>• Clarity</li> </ul>	<ul style="list-style-type: none"> <li>• Background Knowledge</li> <li>• Vocabulary</li> <li>• Comprehension Strategies</li> <li>• Clarity</li> </ul>	<ul style="list-style-type: none"> <li>• Background Knowledge</li> <li>• Vocabulary</li> <li>• Comprehension Strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Conventions</li> <li>• Vocabulary</li> <li>• Comprehension Strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Conventions</li> <li>• Background Knowledge</li> <li>• Comprehension Strategies</li> </ul>
<b>Numeracy</b>	<ul style="list-style-type: none"> <li>• Patterns and Relationships</li> <li>• Time</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Patterns and Relationships</li> <li>• Units of Measurement</li> <li>• Communication</li> <li>• Time</li> <li>• Estimation</li> </ul>	<ul style="list-style-type: none"> <li>• Patterns and Relationships</li> <li>• Units of Measurement</li> <li>• Time</li> <li>• Methods or Tools</li> </ul>	<ul style="list-style-type: none"> <li>• Patterns and Relationships</li> <li>• Measurement</li> <li>• Units of Measurement</li> <li>• Time</li> <li>• Estimation</li> <li>• Methods or Tools</li> </ul>	<ul style="list-style-type: none"> <li>• Calculations</li> <li>• Patterns and Relationships</li> <li>• Measurement</li> <li>• Units of Measurement</li> <li>• Conversions</li> <li>• Time</li> <li>• Estimation</li> <li>• Methods or Tools</li> </ul>

**Mathematics DRAFT Kindergarten to Grade 4 Curriculum**

	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4
<b>Essential Understanding</b>	Engaging with various forms of communication and expression allows us to represent and interpret our understandings of the world in multiple ways.				
<b>Guiding Questions</b>	How can we answer questions with data?	How can we collect and represent data?	How can we represent and describe data?	How can we interpret data?	How can we represent data efficiently?
<b>Learning Outcomes</b>	Children describe data in response to a given question.	Students represent and describe data in response to a given question.	Students represent and describe data in response to student-generated questions.	Students represent and interpret data to answer questions.	Students represent and interpret data when solving problems.
<b>Conceptual Knowledge</b>	<ul style="list-style-type: none"> <li>data can be collected to answer a question</li> <li>data can be represented concretely (concrete graphs)</li> <li>a graph is a way to communicate mathematically about data</li> </ul>	<ul style="list-style-type: none"> <li>data can be used to answer a question</li> <li>data can be represented concretely (concrete graphs) or pictorially (pictographs)</li> <li>a graph is a way to communicate mathematically about and describe data</li> </ul>	<ul style="list-style-type: none"> <li>data can be represented pictorially (pictographs) or graphically (bar graphs)</li> <li>graphs and tables are ways to organize and communicate mathematically about data</li> </ul>	<ul style="list-style-type: none"> <li>bar graphs can represent first-hand or second-hand data</li> <li>data can be used to answer questions</li> <li>graphs and tables are ways to organize, communicate, and facilitate the interpretation of data</li> </ul>	<ul style="list-style-type: none"> <li>tables are chosen based on the size of the data set</li> <li>scale allows a single symbol to represent a number of items (many-to-one correspondence)</li> <li>to organize and communicate more efficiently, larger data sets can be graphed using a scale</li> <li>data can be used to solve problems</li> </ul>
<b>Procedural Knowledge</b>	<ul style="list-style-type: none"> <li>collect first-hand data</li> <li>represent data in concrete graphs using one-to-one correspondence</li> <li>describe data in a graph using comparative vocabulary, including more, less, same, and not the same</li> </ul>	<ul style="list-style-type: none"> <li>collect and classify first-hand data</li> <li>represent data in concrete graphs and pictographs using one-to-one correspondence</li> <li>describe data in a graph using comparative vocabulary, including more, less, most, greatest, least, same, and not the same</li> </ul>	<ul style="list-style-type: none"> <li>formulate simple questions to collect first-hand data</li> <li>collect first-hand data</li> <li>organize data using tables, tally marks, and counts</li> <li>construct pictographs and bar graphs using one-to-one correspondence</li> <li>extract information from a table or a graph</li> </ul>	<ul style="list-style-type: none"> <li>formulate relevant questions to collect first-hand data</li> <li>organize first-hand or second-hand data using tables, tally marks, and line plots</li> <li>construct bar graphs and line plots using one-to-one correspondence</li> <li>extract information from a table or a graph to make comparisons and inferences</li> </ul>	<ul style="list-style-type: none"> <li>clarify the problem</li> <li>construct bar graphs and pictographs using a scale</li> <li>justify inferences and draw conclusions from data</li> <li>solve a problem using data</li> </ul>
<b>Competencies</b>	<ul style="list-style-type: none"> <li>Communication</li> <li>Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>Communication</li> <li>Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>Communication</li> <li>Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>Communication</li> <li>Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>Managing Information</li> <li>Problem Solving</li> </ul>
<b>Literacy</b>	<ul style="list-style-type: none"> <li>Access</li> <li>Vocabulary</li> <li>Clarity</li> <li>Modes and Media</li> </ul>	<ul style="list-style-type: none"> <li>Access</li> <li>Vocabulary</li> <li>Clarity</li> <li>Modes and Media</li> </ul>	<ul style="list-style-type: none"> <li>Develop Questions</li> <li>Access</li> <li>Vocabulary</li> <li>Clarity</li> <li>Modes and Media</li> </ul>	<ul style="list-style-type: none"> <li>Develop Questions</li> <li>Access</li> <li>Vocabulary</li> <li>Modes and Media</li> </ul>	<ul style="list-style-type: none"> <li>Conventions</li> <li>Access</li> <li>Evaluate</li> <li>Vocabulary</li> <li>Comprehension Strategies</li> <li>Modes and Media</li> </ul>
<b>Numeracy</b>	<ul style="list-style-type: none"> <li>Task Analysis</li> <li>Collection of Data</li> <li>Interpretation of Data</li> <li>Interpretation and Representation of Quantitative Information</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Task Analysis</li> <li>Organization of Data</li> <li>Collection of Data</li> <li>Interpretation of Data</li> <li>Interpretation and Representation of Quantitative Information</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Task Analysis</li> <li>Organization of Data</li> <li>Collection of Data</li> <li>Interpretation of Data</li> <li>Interpretation and Representation of Quantitative Information</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Task Analysis</li> <li>Organization of Data</li> <li>Collection of Data</li> <li>Interpretation of Data</li> <li>Interpretation and Representation of Quantitative Information</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Task Analysis</li> <li>Organization of Data</li> <li>Interpretation of Data</li> <li>Interpretation and Representation of Quantitative Information</li> <li>Communication</li> </ul>

**Mathematics DRAFT Kindergarten to Grade 4 Curriculum**

	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4
<b>Essential Understanding</b>	<b>Applying logical thought and creativity enables us to achieve outcomes, solve problems, and develop computational thinking skills.</b>				
<b>Guiding Questions</b>	<b>Why is it important for us to follow instructions carefully?</b>	<b>Why is it important for us to create clear instructions?</b>	<b>How can we make sure instructions lead to the desired outcome?</b>	<b>How can we work together to improve instructions that include repetition?</b>	<b>How can we solve a problem with an algorithm?</b>
<b>Learning Outcomes</b>	<b>Children follow a process while engaging in a learning experience that achieves a desired outcome.</b>	<b>Students follow a determined process and create an original process that achieves a desired outcome.</b>	<b>Students design and test a simple process that achieves a desired outcome.</b>	<b>Students collaboratively design and monitor a process with repetitions that achieves a desired outcome.</b>	<b>Students collaboratively create and justify an algorithm that solves a problem.</b>
<b>Conceptual Knowledge</b>	<ul style="list-style-type: none"> <li>instructions can take many forms, including verbal and visual forms</li> <li>steps in instructions are sequenced in a logical way to achieve a desired outcome</li> </ul>	<ul style="list-style-type: none"> <li>instructions can take many forms, including verbal, visual, and written forms</li> <li>sequencing is used to order steps in instructions in a way that will always produce the desired outcome</li> <li>instructions are informed by cues around us</li> </ul>	<ul style="list-style-type: none"> <li>precise instructions can be followed by people or machines</li> <li>instructions may not always achieve the desired outcome</li> <li>order of steps may or may not affect the outcome</li> </ul>	<ul style="list-style-type: none"> <li>computational thinking as a problem-solving process can include instructions and repetitions</li> <li>instructions must consider the input information and the output information (data)</li> <li>instructions may be simplified by repeating steps</li> <li>order of steps may be changed to achieve a different outcome</li> </ul>	<ul style="list-style-type: none"> <li>computational thinking can include the application of algorithms</li> <li>an algorithm is a step-by-step procedure of operations on data</li> <li>everyday problems can be solved using algorithmic thinking</li> <li>algorithms can vary in efficiency based on contexts and users</li> <li>different algorithms can lead to the same outcome</li> </ul>
<b>Procedural Knowledge</b>	<ul style="list-style-type: none"> <li>follow a sequence of two steps related to a learning experience</li> <li>engage in activities that involve following instructions</li> <li>recognize when instructions do not correspond to actions</li> <li>explore the differences in outcomes when the order of steps is changed</li> </ul>	<ul style="list-style-type: none"> <li>follow 2- or 3-step instructions to achieve a desired outcome</li> <li>sequence 2 or 3 steps to achieve a desired outcome</li> <li>exchange ideas to achieve a desired outcome requiring a 1- to 3-step process</li> <li>create 1- to 3-step instructions to achieve a desired outcome</li> <li>recognize when instructions do not correspond to actions</li> </ul>	<ul style="list-style-type: none"> <li>explain instructions in one’s own words</li> <li>predict the outcome of 3- to 4-step instructions</li> <li>test a sequence of steps to verify the outcome</li> <li>exchange ideas to achieve a desired outcome requiring a 3- to 4-step process</li> <li>remove or fix (debug) any errors in a set of instructions</li> </ul>	<ul style="list-style-type: none"> <li>create instructions with repetition to achieve a desired outcome</li> <li>exchange ideas and share responsibilities when designing and monitoring a process that achieves a desired outcome</li> <li>adjust instructions to achieve a different outcome</li> </ul>	<ul style="list-style-type: none"> <li>consider the contributions of others when creating algorithms</li> <li>design an algorithm to solve a stated problem</li> <li>review the reliability and efficiency of an algorithm</li> <li>adjust an algorithm to obtain a different outcome</li> </ul>
<b>Competencies</b>	<ul style="list-style-type: none"> <li>Problem Solving</li> <li>Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>Problem Solving</li> <li>Creativity and Innovation</li> </ul>	<ul style="list-style-type: none"> <li>Problem Solving</li> <li>Creativity and Innovation</li> </ul>	<ul style="list-style-type: none"> <li>Collaboration</li> <li>Problem Solving</li> </ul>	<ul style="list-style-type: none"> <li>Collaboration</li> <li>Problem Solving</li> </ul>
<b>Literacy</b>	<ul style="list-style-type: none"> <li>Comprehension Strategies</li> <li>Text Organization</li> <li>Intent</li> </ul>	<ul style="list-style-type: none"> <li>Text Organization</li> <li>Comprehension Strategies</li> <li>Intent</li> </ul>	<ul style="list-style-type: none"> <li>Vocabulary</li> <li>Comprehension Strategies</li> <li>Clarity</li> <li>Intent</li> </ul>	<ul style="list-style-type: none"> <li>Vocabulary</li> <li>Comprehension Strategies</li> <li>Clarity</li> <li>Intent</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate</li> <li>Vocabulary</li> <li>Comprehension Strategies</li> <li>Intent</li> </ul>
<b>Numeracy</b>	<ul style="list-style-type: none"> <li>Purpose</li> <li>Location and Direction</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Purpose</li> <li>Using Numbers</li> <li>Location and Direction</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Purpose</li> <li>Task Analysis</li> <li>Location and Direction</li> <li>Communication</li> <li>Estimation</li> </ul>	<ul style="list-style-type: none"> <li>Purpose</li> <li>Task Analysis</li> <li>Location and Direction</li> <li>Communication</li> <li>Methods and Tools</li> </ul>	<ul style="list-style-type: none"> <li>Purpose</li> <li>Task Analysis</li> <li>Strategies</li> <li>Methods and Tools</li> </ul>

**Mathematics DRAFT Kindergarten to Grade 4 Curriculum**

	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4
<b>Essential Understanding</b>	Developing and affirming identity contributes to well-being and understandings of self and one another.				
<b>Guiding Questions</b>	How can we explore mathematics through everyday experiences?	How can we use mathematics in various activities?	How can I view myself as a mathematician?	How can I work like a mathematician?	How can I solve problems like a mathematician?
<b>Learning Outcome</b>	Children explore mathematics through activities that provide positive experiences.	Students engage with mathematics in various activities.	Students engage with mathematics to build perseverance and confidence.	Students develop practices and habits that support their identities as mathematicians.	Students apply mathematical thinking and habits to solve problems.
<b>Conceptual Knowledge</b>	<ul style="list-style-type: none"> <li>some activities involve play with numbers (quantitative information)</li> <li>some activities involve play with shapes (spatial information)</li> </ul>	<ul style="list-style-type: none"> <li>mathematics is all around us</li> <li>there are a variety of ways to engage with mathematics</li> <li>everyone can learn and do mathematics</li> <li>everyone makes and learns from errors</li> </ul>	<ul style="list-style-type: none"> <li>everyone who engages with mathematics is a mathematician</li> <li>mathematicians make and learn from errors</li> <li>mathematicians persevere when seeking solutions</li> </ul>	<ul style="list-style-type: none"> <li>risk taking can support positive interactions and confidence with mathematics</li> <li>mathematicians notice, wonder about, and discuss mathematics</li> <li>everyone can apply mathematics in authentic situations</li> <li>errors are opportunities to develop deeper understanding</li> </ul>	<ul style="list-style-type: none"> <li>embracing challenges supports positive interactions and builds confidence with mathematics</li> <li>mathematicians take risks and persevere when solving problems</li> <li>mathematicians apply and refine strategies to solve problems</li> <li>mathematicians explain their thinking</li> </ul>
<b>Procedural Knowledge</b>	<ul style="list-style-type: none"> <li>construct with materials as mathematical play</li> <li>engage in activities that involve mathematical play</li> <li>engage in different activities that support curiosity with mathematics</li> <li>persevere through obstacles that arise in mathematical play</li> <li>share experiences related to mathematical play</li> </ul>	<ul style="list-style-type: none"> <li>engage in activities that support curiosity with mathematics</li> <li>work together with others (collaborating) to develop understanding of mathematical concepts</li> <li>persevere through obstacles that arise in mathematical experiences</li> <li>share experiences and ideas related to mathematical play</li> </ul>	<ul style="list-style-type: none"> <li>engage in activities that support curiosity with mathematics</li> <li>collaborate to develop understanding of mathematical concepts</li> <li>persevere through obstacles that arise in learning and doing mathematics</li> <li>share strategies related to mathematical play</li> </ul>	<ul style="list-style-type: none"> <li>engage in activities or non-routine problems that support mathematical risk taking and curiosity</li> <li>collaborate to enhance understanding of mathematical concepts</li> <li>persevere when seeking solutions</li> <li>reflect on strengths that lead to success</li> <li>discuss strategies related to mathematical play or non-routine problems</li> </ul>	<ul style="list-style-type: none"> <li>explore challenging activities or non-routine problems that support productive struggle</li> <li>apply creativity and logic to persevere when seeking solutions</li> <li>seek out and solve authentic problems</li> <li>investigate different methods to solve a problem</li> <li>recognize and describe strengths related to solving problems</li> <li>explain or justify a strategy or solution</li> </ul>
<b>Competencies</b>	<ul style="list-style-type: none"> <li>Personal Growth and Well-being</li> <li>Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>Personal Growth and Well-being</li> <li>Managing Information</li> </ul>	<ul style="list-style-type: none"> <li>Personal Growth and Well-being</li> </ul>	<ul style="list-style-type: none"> <li>Problem Solving</li> <li>Critical Thinking</li> </ul>
<b>Literacy</b>	<ul style="list-style-type: none"> <li>Personal Insight</li> <li>Comprehension Strategies</li> <li>Clarity</li> </ul>	<ul style="list-style-type: none"> <li>Personal Insight</li> <li>Comprehension Strategies</li> <li>Clarity</li> </ul>	<ul style="list-style-type: none"> <li>Personal Insight</li> <li>Comprehension Strategies</li> <li>Clarity</li> </ul>	<ul style="list-style-type: none"> <li>Personal Insight</li> <li>Comprehension Strategies</li> <li>Clarity</li> </ul>	<ul style="list-style-type: none"> <li>Personal Insight</li> <li>Comprehension Strategies</li> <li>Clarity</li> </ul>
<b>Numeracy</b>	<ul style="list-style-type: none"> <li>Purpose</li> <li>Personal Insight</li> <li>Task Analysis</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Purpose</li> <li>Personal Insight</li> <li>Task Analysis</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Purpose</li> <li>Personal Insight</li> <li>Task Analysis</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Purpose</li> <li>Personal Insight</li> <li>Task Analysis</li> <li>Communication</li> </ul>	<ul style="list-style-type: none"> <li>Purpose</li> <li>Personal Insight</li> <li>Task Analysis</li> <li>Communication</li> </ul>