

Mathematics

Key for “Province”:

Bold type – BC Big Ideas

Regular type – BC content (K-9)

K-9 Curricular Competencies used throughout all topics: reasoning and analyzing, understanding and solving, communicating and representing

Topics	Gr	North American Division	Province:
Numbers and Operations	4	<i>Place Value:</i> 4.NO.1 Use place value understanding of multi-digit whole numbers to round to any place up to millions (4.NBT.1,3)	(4) Fractions and decimals are types of numbers that can represent quantities: number concepts to 10,000.
		<i>Place Value, cont:</i> 4.NO.2 Read, write, compare, and understand whole numbers using standard, number name, and expanded forms (4.NBT.2)	(4) Fractions and decimals are types of numbers that can represent quantities: number concepts to 10,000.
		<i>Basic Operations:</i> 4.NO.3 Add and subtract multi-digit whole numbers; multiply up to 4 digits X 1 digit and 2 digits X 2 digits; divide using a one-digit divisor and up to a four-digit dividend with and without a remainder (4.NBT.4,5,6)	(4) Development of computational fluency and multiplicative thinking requires analysis of patterns and relations in multiplication and division: addition and subtraction to 10,000, and multiplication and division of two- or three- digit numbers by one-digit numbers.
		<i>Fractions/Decimals:</i> 4.NO.4 Understand, express, and order fractions with different numerators and denominators; numerically express equivalent fractions (4.NF.1,2)	(4) Fractions and decimals are types of numbers that can represent quantities: number concepts to 10,000, decimals to hundredths, and ordering and comparing fractions.
		<i>Fractions/Decimals, cont:</i> 4.NO.5 Add and subtract fractions and mixed numbers with common denominators; multiply fractions by whole numbers (4.NF.3,4)	(4) Fractions and decimals are types of numbers that can represent quantities: number concepts to 10,000, decimals to hundredths, and ordering and comparing fractions.
		<i>Fractions/Decimals, cont:</i> 4.NO.6 Understand, compare, and use decimal notation for fractions with denominators of 10 or 100 (4.NF.5,6,7)	(4) Fractions and decimals are types of numbers that can represent quantities: number concepts to 10,000, decimals to hundredths, and ordering and comparing fractions.
Operations and Algebraic Thinking	4	<i>Multiplication:</i> 4.OAT.1 Memorize and fluently multiply using the multiplication facts through 12	(4) Development of computational fluency and multiplicative thinking requires analysis of patterns and relations in multiplication and division: multiplication and division facts to 100.
		<i>Problem Solving:</i> 4.OAT.2 Solve multi-step word problems including remainder interpretation and estimate to check; create equations with a letter for the unknown (4.OA.1,2,3)	(4) Regular changes in patterns can be identified and represented using tools and tables: algebraic relationships among quantities, and one-step equations with an unknown number using all operations.
		<i>Factors:</i> 4.OAT.3 Find all factor pairs for a whole number within 100; identify whole numbers as prime or composite (4.OA.4)	(4) Regular changes in patterns can be identified and represented using tools and tables: algebraic relationships among quantities.
		<i>Factors, cont:</i> 4.OAT.4 Understand the basic concepts of least common multiple (LCM) and greatest common factor (GCF)	(4) Regular changes in patterns can be identified and represented using tools and tables: algebraic relationships among quantities, and one-step equations with an unknown number using all operations.
		<i>Patterns:</i> 4.OAT.5 Generate and analyze number and shape patterns (4.OA.5)	(4) Regular changes in patterns can be identified and represented using tools and tables: increasing and decreasing patterns, algebraic relationships among quantities, and one-step equations with an unknown number using all operations.

Measurement	4	<p><i>Measurement/Conversion:</i> 4.M.1 Solve problems involving measurement (time, volume, mass, money, simple fractions, decimals, distance) (4.MD.2)</p>	<p>(4) Regular changes in patterns can be identified and represented using tools and tables: how to tell time with analog and digital clocks using 12- and 24-hour clocks.</p> <p>(4) Development of computational fluency and multiplicative thinking requires analysis of patterns and relations in multiplication and division.</p>
		<p><i>Measurement/Conversion, cont:</i> 4.M.2 Convert measurement from a larger unit to a smaller unit (km, m, cm; kg, g; lb, oz; L, mL; hr, min, sec) (4.MD.1)</p>	<p>(4) Regular changes in patterns can be identified and represented using tools and tables: algebraic relationships among quantities, and one-step equations with an unknown number using all operations.</p>
		<p><i>Measurement/Conversion, cont:</i> 4.M.3 Apply area and perimeter formulas (4.MD.3)</p>	<p>(4) Polygons are closed shapes with similar attributes that can be described, measured, and compared: regular and irregular polygons, perimeter or regular and irregular shapes, line symmetry.</p> <p>(5) Closed shapes have area and perimeter that can be described, measured, and compared: area measurement of squares and rectangles, and relationships between area and perimeter.</p>
		<p><i>Measurement/Conversion, cont:</i> 4.M.4 Read a Fahrenheit and Celsius thermometer knowing the significance of 32°F, 212°F, 0°C, and 100°C</p>	<p>(4) Regular changes in patterns can be identified and represented using tools and tables: algebraic relationships among quantities, and one-step equations with an unknown number using all operations.</p>
		<p><i>Angles:</i> 4.M.5 Recognize angles as geometric shapes that are formed wherever two rays share a common end point; understand concepts of angle measurement and measure angles in whole-number degrees (4.MD.5,6,7)</p>	<p>(4) Polygons are closed shapes with similar attributes that can be described, measured, and compared: regular and irregular polygons, perimeter or regular and irregular shapes, line symmetry.</p>
		<p><i>Money:</i> 4.M.6 Know how to count up to make change</p>	<p>(4) Analyzing and interpreting experiments in data probability develops an understanding of chance: financial literacy.</p>
Geometry	4	<p><i>Lines/Angles:</i> 4.GEO.1 Draw and identify points, lines, line segments, rays, angles, and perpendicular and parallel lines (4.G.1)</p>	<p>(4) Polygons are closed shapes with similar attributes that can be described, measured, and compared: line symmetry.</p>
		<p><i>Lines/Angles, cont:</i> 4.GEO.2 Classify figures with perpendicular and parallel lines, and angles of a specified size (4.G.2)</p>	<p>(4) Polygons are closed shapes with similar attributes that can be described, measured, and compared: regular and irregular polygons, and line symmetry.</p>
		<p><i>Lines/Angles, cont:</i> 4.GEO.3 Recognize and draw lines of symmetry with two-dimensional figures (4.G.3)</p>	<p>(4) Polygons are closed shapes with similar attributes that can be described, measured, and compared: regular and irregular polygons, and line symmetry.</p>
Data Analysis, Statistics, and Probability	4	<p><i>Data:</i> 4.DSP.1 Solve addition and subtraction problems using a line plot to display a data set of measurement in fractions of a unit (halves, fourths, and eighths) (4.MD.4)</p>	<p>(4) Analyzing and interpreting experiments in data probability develops an understanding of chance: one-to-one correspondence and many-to-one correspondence using bar graphs and pictographs.</p>