

Measures of Academic Progress (MAP) British Columbia Aligned Version 7

The NWEA Goal Structure is a document that represents the content and structure of a province's curriculum documents. Goal structures are created through an alignment process that links provincial curriculum documents to the NWEA item bank. The MAP tests and associated reports for teachers and students are based upon this structure and alignment.

The alignment process begins with a thorough review of the curriculum documents by NWEA's content specialists. The Organizers within the curriculum that appear across grade levels become the goals in the goal structure (indicated below as bold). Sub-domains of the Organizers become the sub-goals in the goal structure (indented under each goal below).

Goal and sub-goal names from the Goal Structure are shortened for technical reasons to create the headings in DesCartes. Report Names may be shortened further to accommodate report specifications.

Mathematics 2-5 Goal Structure	Mathematics 2-5 DesCartes	Mathematics 2-5 Report Names
Number	Number	Number
Develop number sense: Say the number sequence forward and backward from 0 to 1000 by 1s, 2s, 3s, 4s, 5s, 10s, 25s, or 100s; illustrate, concretely and pictorially, the meaning of place value for numerals; represent and describe whole numbers pictorially and symbolically; demonstrate if a number is even or odd; describe order or relative position using ordinal numbers; compare and order numbers.	Represent, Describe, and Order Whole Numbers	
Develop number sense: Demonstrate an understanding of addition of numbers and their corresponding subtractions by solving problems involving addition and subtraction; apply estimation strategies to predict sums and differences; demonstrate an understanding of multiplication to solve problems; apply number properties for adding, subtracting and multiplying; demonstrate an understanding of division to solve problems; interpret remainders to solve problems.	Add, Subtract, Multiply, and Divide Whole Numbers	



Develop number sense: Demonstrate an understanding of fractions by using concrete and pictorial representations to name and record fractions for the parts of a whole or a set, create sets of equivalent fractions, compare fractions with like and unlike denominators; describe and represent decimals concretely, pictorially and symbolically; relate decimals to fractions; compare and order decimals by using benchmarks, place value, equivalent decimals.	Represent, Describe, Order: Fractions & Decimals	
Develop number sense: Demonstrate an understanding of addition and subtraction of decimals by using compatible numbers, estimating sums and differences, using mental math strategies to solve problems.	Addition and Subtraction of Decimals	
Patterns and Relations	Patterns and Relations	Patterns and Relations
Use patterns to describe the world and solve problems: Demonstrate an understanding of repeating, increasing, and decreasing patterns by describing, extending, comparing; determine the pattern rule to make predictions about subsequent elements; represent and describe patterns and relationships using charts and tables to solve problems; identify and explain mathematical relationships using charts and diagrams to solve problems.	Represent and Describe Patterns and Relationships	
Represent algebraic expressions in multiple ways: Demonstrate and explain the meaning of equality and inequality by using manipulatives and diagrams; record equalities and inequalities symbolically; express a given problem as an equation in which a symbol is used to represent an unknown number; solve equations involving a symbol to represent an unknown number.	Algebraic Expressions, Equations, Inequalities	



Shape and Space	Shape and Space	Shape and Space
Use direct and indirect measure to solve problems: Compare and order objects by length, height, and mass (weight) using nonstandard units; relate the passage of time in a problem-solving context; read and record time using digital and analog clocks; measure length to the nearest non-standard unit; demonstrate an understanding of measuring length, mass, and capacity by describing the relationship between the units, estimating using referents, measuring; demonstrate an understanding of perimeter and area of regular and irregular 2-D shapes; demonstrate an understanding of volume.	Direct and Indirect Measurement	
Describe and analyze the characteristics, position and motion of 3-D objects and 2-D shapes: Sort 2-D shapes and 3-D objects using attributes; describe 3-D objects according to the shape of the faces, and the number of edges and vertices; describe and construct rectangular and triangular prisms; describe, compare and construct 2-D shapes; sort regular and irregular polygons; identify and sort quadrilaterals according to their attributes; demonstrate an understanding of line symmetry; perform a transformation of a 2-D shape and describe the image.	Characteristics and Motion of Objects and Shapes	
Statistics and Probability	Statistics and Probability	Statistics and Probability
Collect, display and analyze data to solve problems: Gather and record data to answer questions; construct and interpret concrete graphs and pictographs to solve problems and draw conclusions; collect data and organize it using, tally marks, line plots, charts, lists to answer questions; construct, label and interpret bar graphs and double bar graphs to solve problems and draw conclusions; compare graphs in which different intervals or correspondences are used.	Collect, Display and Analyze Data	
Use experimental or theoretical probabilities to represent and solve problems involving uncertainty: Describe the likelihood of a single outcome occurring using words, such as impossible, possible, certain; compare the likelihood of two possible outcomes occurring using words, such as less likely, equally likely, more likely; conduct a given probability experiment a number of times, record the outcomes and explain the results.	Experimental and Theoretical Probabilities	



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Mathematics 6+ Goal Structure	Mathematics 6+ DesCartes	Mathematics 6+ Report Names
Number	Number	Number
Develop number sense: Demonstrate an understanding of place value for numbers; relate improper fractions to mixed numbers; demonstrate an understanding of the relationship between positive repeating decimals and positive fractions, and positive terminating decimals and positive fractions; demonstrate an understanding of integers; compare and order positive fractions, positive decimals, and whole numbers by using benchmarks, place value, equivalent fractions and/or decimals; demonstrate an understanding of rational numbers by comparing and ordering rational numbers; demonstrate an understanding of irrational numbers by representing, identifying and simplifying irrational numbers.	Numbers and Their Relationships	
Develop number sense: Demonstrate an understanding of factors and multiples by determining multiples, factors, prime factors, greatest common factor, and least common multiple, and identifying prime and composite numbers; determine why a number is divisible by 2, 3, 4, 5, 6, 8, 9 or 10; demonstrate an understanding of perfect square, square root, cube root; demonstrate an understanding of powers with whole number, integral and rational exponents; demonstrate an understanding of operations on powers with integral bases and whole number exponents.	Factors, Multiples, Roots, and Powers	
Develop number sense: Apply the order of operations; solve problems involving large numbers; demonstrate an understanding of the addition, subtraction, multiplication and division of decimals; demonstrate an understanding of adding, subtracting, multiplying, and dividing positive fractions and mixed numbers; demonstrate an understanding of addition, subtraction, multiplication, and division of integers.	Operations: Decimals, Fractions, Integers	



Develop number sense: Demonstrate an understanding of ratio and rate; demonstrate an understanding of percent; solve problems involving percents; solve problems that involve rates, ratios and proportional reasoning.	Ratio, Rates, Percents, Proportional Reasoning	
Patterns and Relations	Patterns and Relations	Patterns and Relations
Use patterns to describe the world and solve problems: Demonstrate an understanding of the relationships within tables of values to solve problems; demonstrate an understanding of written patterns and their equivalent linear relations; generalize a pattern arising from a problem-solving context using linear equations, graphs and tables.	Represent and Describe Patterns and Relationships	
Use patterns to describe the world and solve problems: Demonstrate an understanding of slope; determine the equation of a linear relation, given a graph, a point and the slope, two points, a point and the equation of a parallel or perpendicular line; relate linear relations expressed in slope–intercept form, general form, slope–point form to their graphs; demonstrate an understanding of relations and functions; determine the characteristics of the graphs of linear relations and quadratic functions, including the intercepts, slope, domain, range, vertex, axis of symmetry.	Relations and Characteristics of Graphs	
Represent algebraic expressions in multiple ways: Represent generalizations arising from number relationships using equations with letter variables; evaluate an expression given the value of the variable(s); demonstrate an understanding of preservation of equality; model and solve problems that can be represented by linear equations and inequalities; model and solve problems that involve systems of linear equations and inequalities in two variables; demonstrate an understanding of polynomials; model operations of polynomial expressions; demonstrate an understanding of common factors and trinomial factoring.	Algebraic Expressions, Equations, Inequalities	



Shape and Space	Shape and Space	Shape and Space
<p>Use direct and indirect measure to solve problems: Solve problems that involve linear measurement; apply proportional reasoning to problems that involve conversions within SI units of measure; demonstrate that the sum of interior angles is 180° in a triangle; draw nets for 3-D objects; apply formulas for determining the perimeter and area of polygons and circles; apply formulas for determining the volume and surface area; demonstrate an understanding of circles by describing the relationships among radius, diameter, circumference and pi; solve problems using circle properties; apply the Pythagorean theorem to solve problems; apply the primary trigonometric ratios to solve problems that involve right triangles.</p>	<p>Direct and Indirect Measurement</p>	
<p>Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them: Compare triangles, including scalene, isosceles, equilateral, right, obtuse, and acute; describe and compare regular and irregular polygons; demonstrate an understanding of similarity of polygons; solve problems that involve scale diagrams, using proportional reasoning; perform geometric constructions; solve problems that involve the properties of angles and triangles; draw and interpret top, front and side views of 3-D objects.</p>	<p>Characteristics of 3-D Objects and 2-D Shapes</p>	
<p>Describe and analyze position and motion of objects and shapes: Identify and plot points in the Cartesian plane; perform a combination of translation(s), rotation(s) and/or reflection(s) on a single 2-D shape, and describe the image; demonstrate an understanding of tessellation by explaining the properties of shapes that make tessellating possible; demonstrate an understanding of line and rotation symmetry.</p>	<p>Position and Motion of Objects and Shapes</p>	



Statistics and Probability	Statistics and Probability	Statistics and Probability
<p>Collect, display and analyze data to solve problems: Create, label and interpret line graphs and circle graphs to solve problems and draw conclusions; demonstrate an understanding of central tendency and range; determine the effect on the mean, median and mode when an outlier is included in a data set; select a sample of a population to answer a question; describe the effect of bias on the collection of data; demonstrate an understanding of normal distribution; interpret statistical data, using confidence intervals.</p>	<p>Collect, Display and Analyze Data</p>	
<p>Use experimental or theoretical probabilities to represent and solve problems involving uncertainty: Demonstrate an understanding of probability by identifying all possible outcomes of a probability experiment, differentiating between experimental and theoretical probability, determining the theoretical probability of outcomes in a probability experiment, determining the experimental probability of outcomes in a probability experiment, comparing experimental results with the theoretical probability for an experiment; solve problems involving the probability of independent events.</p>	<p>Experimental and Theoretical Probabilities</p>	



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Reading Goal Structure	Reading DesCartes	Reading Report Names
Reading and Viewing: Purposes	Reading: Purposes	Purposes
Read and demonstrate comprehension and interpretation of a range of grade-appropriate literary texts, featuring some complexity in theme and writing techniques, including stories from a variety of genres, poetry in a variety of forms, and poems that make use of literary devices	Comprehension of Literary Texts	
Read and demonstrate comprehension of grade-appropriate information texts with some specialized language and some complex ideas, including non-fiction books, textbooks and other instructional materials, visual or graphic materials, reports and articles, reference materials, instructions and procedures, advertising and promotional materials; view and demonstrate comprehension of visual texts	Comprehension of Information Texts	
Reading and Viewing: Strategies and Thinking	Reading: Strategies and Thinking	Strategies and Thinking
Select and use various strategies during and after reading to construct, monitor, and confirm meaning, including predicting, answering questions, and making inferences and drawing conclusions	Predicting, Inferring, and Drawing Conclusions	
Select and use various strategies during and after reading to construct, monitor, and confirm meaning, including figuring out unknown words, summarizing and synthesizing	Figuring Out Unknown Words, Summarizing	
Read and view to improve and extend thinking, by analysing and evaluating ideas and information, distinguishing between fact and opinion, and comparing	Evaluating Ideas, Fact and Opinion, Comparing	



Reading and Viewing: Features [Literary and Informational Text]	Reading: Features [Literary, Informational Text]	Text Features
Explain how structures and features of text work to develop meaning, including form, function, and genre of text; text features	Features of Text, Form and Function	
Explain how structures and features of text work to develop meaning, including literary elements and literary devices	Literary Elements and Literary Devices	
Explain how structures and features of text work to develop meaning, including non-fiction elements (e.g., topic sentence, development of ideas with supporting details, central idea)	Topic Sentence, Supporting Details, Development	
Reading and Viewing: Features: [Concepts of Print, Vocabulary, Word Patterns]	Reading: Features: [Vocabulary, Word Patterns]	Features: Words and Vocabulary
Explain how structures and features of text work to develop meaning, including idiomatic expressions, concepts about print and concepts about books, the vocabulary associated with texts; use knowledge of word patterns, word families, and letter-sound relationships to decode unknown words and recognize an increasing number of high-frequency words	Word Patterns, Families, and Decoding	



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Language Usage Goal Structure	Language Usage DesCartes	Language Usage Report Names
Writing and Representing: Purposes	Writing and Representing: Purposes	Purposes
Write a variety of effective informational writing and imaginative writing for a range of purposes and audiences that communicates ideas to inform or persuade, featuring clearly developed ideas by using focused and useful supporting details, analysis, and explanations, sentence fluency through strong, well-constructed sentences that demonstrate a variety of lengths and patterns, with an increasingly fluid style	Clear Ideas, Supporting Detail, and Sentence Variety	
Write a variety of effective informational and imaginative writing for a range of purposes and audiences that communicates ideas to inform or persuade, featuring clearly developed ideas by using effective word choice by using content words, precise nouns, and powerful verbs and modifiers, a voice demonstrating an appreciation and interest in the topic, an organization that includes an inviting lead that clearly indicates the purpose, followed by a well-developed and clear sequence of paragraphs or sections that lead to a strong conclusion	Word Choice, Nouns, Verbs, Modifiers, Paragraphs	
Writing and Representing: Strategies	Writing and Representing: Strategies	Strategies
Select and use various strategies before writing and representing, including setting a purpose, identifying an audience, genre, and form	Determining Purpose and Audience	
Select and use various strategies during writing and representing to express and refine thoughts, including revising to enhance writing traits (e.g., ideas, sentence fluency, word choice, voice, organization), and editing for conventions (e.g., grammar and usage, capitalization, punctuation, spelling)	Revising and Editing	



Writing and Representing: Thinking	Writing and Representing: Thinking	Thinking
Use writing and representing to extend thinking by presenting new understandings in a variety of forms and analysing the relationships in ideas and information	Write in a Variety of Forms	
Writing and Representing: Features	Writing and Representing: Features	Features
Use the features and conventions of language to express meaning in their writing and representing, including complete simple, compound, and complex sentences, subordinate and independent clauses, comparative and superlative forms of adjectives, past, present, and future tenses, correct subject-verb and pronoun agreement in sentences with compound subjects	Features: Sentence Type, Agreement	
Use the features and conventions of language to express meaning in their writing and representing, including correct and effective use of punctuation	Features and Conventions: Punctuation	
Use the features and conventions of language to express meaning in their writing and representing, including spelling unfamiliar words by applying strategies (e.g., phonic knowledge, use of common spelling patterns, dictionaries, thesaurus); information taken from secondary sources with source citation	Features and Conventions: Spelling and Citation	
Use the features and conventions of language to express meaning in their writing and representing, including correct capitalization	Features and Conventions: Capitalization	

