

Measures of Academic Progress (MAP) Louisiana State-Aligned Version 2

The NWEA Goal Structure is a document that represents the content and structure of a state’s standards documents. Goal structures are created through an alignment process that links state standards 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 a state’s standards documents by NWEA’s curriculum specialists. The general goal areas or strands within a state’s standards that appear across grade levels become the goals in the goal structure (indicated below as bold). Areas in a state’s standards documents that are determined to be sub-domains of the goals/strands 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 are shortened further to accommodate report specifications.

Mathematics 2-5 Goal Structure	Mathematics 2-5 DesCartes	Mathematics 2-5 Report Names
Number and Number Relations	Number and Number Relations	Number; Number Relations
Whole numbers; represent, identify, and count: read, write, compare, and order whole numbers using place value concepts, standard notation, and models through 1,000,000; count forward and backward and by 2s*	Whole Numbers: Represent, Identify, and Count	
Whole numbers; compare, order, and round: compare and order whole numbers using place value concepts, standard notation, and models through 1,000,000; round to the nearest 1000 using the words same/different and more/less/fewer*	Whole Numbers: Compare, Order, and Round	

<p>Fractions and decimals; represent and identify: read, explain, and write a numerical representation for positive improper fractions, mixed numbers, and decimals from a pictorial representation and vice versa; recognize, explain, and compute equivalent fractions for common fractions; read, write, and relate decimals through hundredths and connect them with corresponding decimal fractions; recognize, explain, and compute equivalent fractions for common fractions; relate decimals through hundredths and connect them with corresponding decimal fractions; recognize and compute equivalent representations of fractions, decimals, and percents (i.e., halves, thirds, fourths, fifths, eighths, tenths, hundredths); read and write numerals and words for decimals through ten-thousandths*</p>	<p>Fractions and Decimals: Represent and Identify</p>	
<p>Fractions and decimals; compare and order: compare positive fractions, decimals, and percents using symbols (i.e., $<$, \leq, $=$, \geq, $>$) and position on a number line; relate decimals through hundredths and connect them with corresponding decimal fractions*</p>	<p>Fractions and Decimals: Compare and Order</p>	
<p>Percent, ratio, and proportion; represent and identify: explain concepts of ratios and equivalent ratios using models and pictures in real-life problems</p>	<p>Percent, Ratio, Proportion: Represent, Compute</p>	
<p>Number theory: differentiate between the terms factor and multiple, and prime and composite; illustrate with manipulatives when a number is divisible by 2, 3, 5, or 10</p>	<p>Number Theory</p>	
<p>Whole numbers; addition and subtraction: use operational vocabulary, know all basic facts for addition and subtraction and use them to solve real-life problems; recognize and apply addition and subtraction as inverse operations*</p>	<p>Whole Numbers: Add and Subtract</p>	



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Whole numbers; multiplication and division: recognize, select, connect, sequence, and use operations, operational words, and symbols (i.e., +, -, x, ÷) to solve real-life situations; know all basic facts for multiplication and division through 12×12 and $144 \div 12$, and recognize factors of composite numbers less than 50; recognize and model multiplication as a rectangular array or as repeated addition; recognize and model division as separating quantities into equal subsets (fair shares) or as repeated subtraction; recognize and apply multiplication and division as inverse operations*	Whole Numbers: Multiply and Divide	
Fractions and decimals; addition and subtraction: add and subtract fractions; model addition and subtraction of decimals with money*	Fractions and Decimals: Add and Subtract	
Estimation strategies: use mental math and estimation strategies to predict the results of computations (i.e., whole numbers, addition and subtraction of fractions, and fractional amounts) and to test the reasonableness of solutions*	Estimation Strategies	
Measurement	Measurement	Measurement
Length, weight/mass, and capacity/volume: estimate, measure, and compare length, weight/mass, and capacity/volume; use U.S. and metric; convert within the same system; compare and estimate conversions between systems	Length, Weight/Mass, and Capacity/Volume	
Temperature, angles and time: estimate, measure, and compare temperature, angles, and time.; including elapsed time and time zones	Temperature, Angles, and Time	
Perimeter and area: estimate, measure, and compare perimeter and area of rectangular objects, including non-standard units	Perimeter and Area	
Geometry	Geometry	Geometry
Points, lines, angles: identify, describe, and classify points, rays, segments, lines, and angles (e.g., perpendicular, parallel, intersecting, horizontal, vertical, acute, right, obtuse)	Points, Lines, Angles: Identify and Classify	



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2- and 3-D shapes: identify, describe, classify, compare and contrast two- and three-dimensional shapes (e.g., circles, triangles, polygons, spheres, cylinders, prisms, pyramids, and cones); predict new shapes created by cutting apart and combining given shapes; identify and match nets or views with corresponding three-dimensional figures	2- and 3-D Shapes: Identify, Classify	
Similar, congruent, transformations, and symmetry: identify similar and congruent figures; identify and predict the results of transformations; identify figures that have line or rotational symmetry	Similar, Congruent, Transformations, Symmetry	
Coordinate plane: specify locations, identify and plot points on a coordinate plane in the first quadrant; find the length of a horizontal or vertical path between two points	Coordinate Plane: First Quadrant	
Data Analysis, Probability, and Discrete Math	Data Analysis, Probability, and Discrete Math	Data, Prob, Discrete Math
Organize, display, and interpret data: generate survey questions, display, read, and interpret charts and graphs (e.g., pictographs, double bar graphs, line plots, tables, Venn diagrams); compare and contrast survey data from two groups; sort objects by qualitative and quantitative characteristics; represent and solve problems using data, deductive reasoning, and elementary set logic	Organize, Display, and Interpret Data	
Analyze data: find and interpret the meaning of mean, mode, and median	Analyze Data: Central Tendency	
Probability: use lists, tables, and tree diagrams to generate and record all possible outcomes; represent probabilities as common fractions; solve problems by applying probabilistic reasoning	Probability	
Algebra, Patterns, Relations, and Functions	Algebra, Patterns, Relations, and Functions	Algebra and Functions
Patterns: recognize, extend, create, and explain repeating, growing, and geometric shape patterns; complete tables, state the rule, and solve problem situations	Patterns: Repeating and Growing	
Basic functions: represent the relationship in an input-output situation using a simple equation, graph, table, or word description; function machines	Basic Functions	



<p>Expressions, equality, equations, and inequalities: analyze and describe situations where proportional trades or correspondences are required; apply the associative, commutative, and distributive properties to numerical expressions; identify and create true/false and open/closed number sentences; solve one-step equations and inequalities involving whole numbers; solve real-world problems</p>	<p>Expressions, Equality, Equations, Inequalities</p>	
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*Denotes that calculator use is not permitted in this goal or sub-goal of the test.

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Mathematics 6+ Goal Structure	Mathematics 6+ DesCartes	Mathematics 6+ Report Names
Number and Number Relations	Number and Number Relations	Number; Number Relations
Whole numbers; represent, identify, and count: read and write whole numbers using place value concepts, standard notation, and models through 1,000,000; count forward and backward and by 2s*	Whole Numbers: Represent, Identify, and Count	
Whole numbers; compare, order, and round: compare and order whole numbers using place value concepts, standard notation, and models through 1,000,000; round to the nearest 1000 using the words same/different and more/less/fewer*	Whole Numbers: Compare, Order, and Round	
Fractions and decimals; represent and identify: read, explain, and write a numerical representation for positive improper fractions, mixed numbers, and decimals from a pictorial representation and vice versa; recognize, explain, and compute equivalent fractions for common fractions; read, write, and relate decimals through hundredths and connect them with corresponding decimal fractions; recognize, explain, and compute equivalent fractions for common fractions; relate decimals through hundredths and connect them with corresponding decimal fractions; recognize and compute equivalent representations of fractions, decimals, and percents (i.e., halves, thirds, fourths, fifths, eighths, tenths, hundredths); read and write numerals and words for decimals through ten-thousandths*	Fractions and Decimals: Represent and Identify	
Fractions and decimals; compare and order: compare positive fractions, decimals, and percents using symbols (i.e., $<$, \leq , $=$, \geq , $>$) and position on a number line; relate decimals through hundredths and connect them with corresponding decimal fractions*	Fractions and Decimals: Compare and Order	



Real and complex numbers; represent, identify, compare, and order: includes integers, rational, irrational, and imaginary numbers; apply powers, roots, scientific notation, and logarithms; identify missing information or suggest a strategy for solving a real-life, rational-number problem; compare integers using symbols (i.e., $<$, \leq , $=$, \geq , $>$) and position on a number line*	Real and Complex Numbers: Represent, Compare	
Percent, ratio, and proportion; represent and identify, compute, and solve problems: explain concepts of ratios and equivalent ratios using models and pictures in real-life problems; use proportions involving whole numbers ; solve real-life problems involving percentages, similar figures and scale drawings, direct and inverse variation, and unit/cost rates; define and calculate sine, cosine, and tangent in ratio form;	Percent, Ratio, Proportion: Represent, Compute	
Number theory: factor whole numbers into primes; determine common factors and common multiples for pairs of whole numbers; find the greatest common factor (GCF) and least common multiple (LCM) for whole numbers in the context of problem-solving	Number Theory	
Whole numbers; addition and subtraction: use operational vocabulary, know all basic facts for addition and subtraction and use them to solve real-life problems; recognize and apply addition and subtraction as inverse operations*	Whole Numbers: Add and Subtract	

Whole numbers; multiplication and division: recognize, select, connect, sequence, and use operations, operational words, and symbols (i.e., +, -, x, ÷) to solve real-life situations; know all basic facts for multiplication and division through 12×12 and $144 \div 12$, and recognize factors of composite numbers less than 50; recognize and model multiplication as a rectangular array or as repeated addition; recognize and model division as separating quantities into equal subsets (fair shares) or as repeated subtraction; recognize and apply multiplication and division as inverse operations; solve order of operations problems involving grouping symbols and multiple operations; model and apply the distributive property in real-life applications; mentally multiply and divide by powers of 10	Whole Numbers: Multiply and Divide	
Fractions and decimals; addition and subtraction: add and subtract fractions and decimals; apply in real-life situations	Fractions and Decimals: Add and Subtract	
Fractions and decimals; multiplication and division: multiply and divide positive fractions and decimals	Fractions and Decimals: Multiply and Divide	
Real and complex numbers; computation: read, write, and perform basic operations on expressions containing complex numbers, real numbers, expressions containing radicals, rational exponents, scientific notation using grouping symbols, order of operations	Real and Complex Numbers: Computation	
Estimation: use mental math and estimation strategies to predict the results of computations with rational numbers and to test the reasonableness of solutions; distinguish between an exact and an approximate answer, and recognize errors introduced by the use of approximate numbers with technology	Estimation Strategies	
Measurement	Measurement	Measurement
Length, weight/mass, and capacity/volume: estimate, measure, and compare length, weight/mass, and capacity/volume; use U.S. and metric; convert within the same system; compare and estimate conversions between systems	Length, Weight/Mass, and Capacity/Volume	



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Temperature, angles and time: estimate, measure, and compare temperature, angles, and time; including elapsed time and time zones; calculate angle measures in degrees, minutes, and seconds; explain the unit circle basis for radian measure and show its relationship to degree measure of angles; convert temperature within the same system; compare and estimate conversions between temperature systems	Temperature, Angles, and Time	
Perimeter and area: estimate, measure, compare, and calculate perimeter and area of rectangular objects, including non-standard units, polygons, prisms, cylinders, pyramids, spheres, and cones	Perimeter and Area	
Surface area and volume: estimate, measure, compare, and calculate surface area and volume of rectangular objects, including non-standard units, polygons, prisms, cylinders, pyramids, spheres, and cones	Surface Area and Volume	
Trigonometry: model and use trigonometric ratios to solve problems involving right triangles; use the law of sines and the law of cosines to solve problems involving triangle measurements; identify and apply the unit circle definition to trigonometric functions and use this definition to solve real-life problems; determine angle measures and side lengths of right and similar triangles using the Pythagorean theorem, trigonometric ratios, and properties of similarity, including congruence [from Geometry]	Trigonometry: Triangles and Functions	
Measurement concepts and strategies: precision and accuracy and estimation strategies: distinguish between precision and accuracy; includes appropriate units, the scale of a measuring instrument, significant digits, relative measurement error, absolute error, indirect methods, and problem solving	Measurement Concepts and Strategies	



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Geometry	Geometry	Geometry
<p>Points, lines, angles: identify, describe, and classify points, rays, segments, lines, and angles (e.g., perpendicular, parallel, intersecting, horizontal, vertical, acute, right, obtuse); define and apply the terms measure, distance, midpoint, bisect, bisector, and perpendicular bisector; determine angle measurements using the properties of parallel, perpendicular, and intersecting lines in a plane; form and test conjectures concerning geometric relationships; compare and contrast inductive and deductive reasoning approaches to justify conjectures and solve problems</p>	<p>Points, Lines, Angles: Identify and Classify</p>	
<p>2- and 3-D shapes: identify, describe, classify, compare and contrast two- and three-dimensional shapes (e.g., circles, triangles, polygons, spheres, cylinders, prisms, pyramids, cones, and polyhedra); predict new shapes created by cutting apart and combining given shapes; identify and match nets or views with corresponding three-dimensional figures; solve problems and determine measurements involving chords, radii, arcs, angles, secants, and tangents of a circle; form and test conjectures concerning geometric relationships; develop formal and informal proofs; identify and describe the relationship of the plane and double-napped cone that forms each conic, including the degenerate conics [see Algebra: Relations and Functions]</p>	<p>2- and 3-D Shapes: Identify, Classify</p>	
<p>Similar, congruent, transformations, symmetry: identify similar and congruent figures; represent translations, reflections, rotations, and dilations of plane figures using sketches, coordinates, vectors, and matrices; determine angle measures and side lengths of right and similar triangles using properties of similarity, including congruence; identify figures that have line or rotational symmetry; make and test predictions regarding tessellations with geometric shapes</p>	<p>Similar, Congruent, Transformations, Symmetry</p>	



Coordinate plane: specify locations, identify and plot points in all four quadrants; represent and solve problems involving distance, geometric shapes, reflections, and translations	Coordinate Plane: All Quadrants	
Data Analysis, Probability, and Discrete Math	Data Analysis, Probability, and Discrete Math	Data, Prob, Discrete Math
Organize, display, and interpret data: generate survey questions; consider randomization and the effects of sample size and bias; display, read, and interpret charts and graphs (e.g., pictographs, double bar graphs, line plots, tables, Venn diagrams, line graphs, box-and-whisker plots, scatter plots, matrices, or circle graphs); compare and contrast survey data from two groups; sort objects by qualitative and quantitative characteristics; represent and solve problems using data, deductive reasoning, and elementary set logic; use discrete math to model real life situations; represent data and solve problems involving Euler and Hamiltonian paths (vertex-edge graphs); follow and interpret processes expressed in flow charts (algorithms), model and solve real-life problems involving counting techniques, Venn diagrams, fair games, elections, and logic	Organize, Display, and Interpret Data	
Analyze data: describe and interpret data based on measures of central tendency and distribution (e.g., mean, mode, median, range, range, quartiles, clusters, gaps, and outliers); identify trends and determine regression equations; interpret and explain regression and correlations coefficients; determine whether the data is discrete or continuous, linear or non-linear; make predictions and solve real-life problems based on data	Analyze Data: Central Tendency, Distribution	
Probability: use counting techniques to determine sample spaces; determine and compare experimental and theoretical probabilities; solve real-life problems	Probability	

Algebra, Patterns, Relations, and Functions	Algebra, Patterns, Relations, and Functions	Algebra and Functions
Patterns: recognize, extend, create, and explain repeating, growing, and geometric shape patterns; translate among tabular, graphical, and symbolic representations of patterns; and solve problem situations	Patterns: Repeating and Growing	
Sequences, series, relations and functions: represent the relationship in an input-output situation using a simple equation, graph, table, word description, or function machines; represent and solve problems involving nth terms and sums for arithmetic and geometric sequences and series; describe patterns in sequences of arithmetic and geometric growth and now-next relationships; determine if a relation is a function; represent and evaluate functions, linear and non-linear, symbolically and graphically; graph function using transformations in the plane; translate among tabular, graphical, and algebraic representations of functions and real life situations; identify independent and dependent variables; analyze functions based on zeros, asymptotes, and local and global characteristics; relations; identify conic sections, including the degenerate conics, and describe the relationship of the plane and double-napped cone that forms each conic [from Geometry]	Sequences, Series, Relations and Functions	
Rates of change: compare and contrast linear functions in terms of their rates of change and intercepts; explain and formulate generalizations about how a change in one variable results in a change in another variable; illustrate patterns of change in dimension(s) and corresponding changes in areas and volumes of polygons and rectangular solids [from Measurement]	Rates of Change	

<p>Expressions, equality, equations, and inequalities: rewrite, simplify and evaluate expressions involving real numbers, solve and graph linear and non-linear equations, inequalities, and systems of linear and non-linear inequalities; categorize equations as to type and represent them with tables or graphs; includes linear, quadratic, cubic, exponential, logarithmic, step function, rational, trigonometric, and absolute value equations; describe and compare situations with constant or varying rates of change</p>	<p>Expressions, Equality, Equations, Inequalities</p>	
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Reading Goal Structure	Reading DesCartes	Reading Report Names
Read and Comprehend Using a Variety of Strategies [Word Meaning and Analysis]	Read: A Variety of Strategies	Reading Strategies
Phonemic awareness and phonics	Phonemic Awareness and Phonics	
Vocabulary and context clues	Vocabulary and Context Clues	
Multiple meanings	Multiple Meanings	
Affixes and word derivations	Affixes and Word Derivations	
Read and Comprehend Using a Variety of Strategies [Literal Comprehension]	Genre, Retell, Locate Info	Genre, Retell, Locate Info
Interpret texts: retell and summarize	Interpret Texts: Retelling and Summarizing	
Identify and distinguish various genres	Identify and Distinguish Various Genres	
Locate information, sequence	Locate Information, Sequencing	
Determine main idea	Determine Main Idea	
Read and Comprehend Using a Variety of Strategies [Interpretive Comprehension]	Comp Strat, Elements, Devices	Compre Strat, Elem, Devices
Recognize author's purpose	Recognize Author's Purpose	
Interpret story elements	Interpret Story Elements	
Interpret literary devices	Interpret Literary Devices	
Use comprehension strategies: predict, make inferences, draw conclusions	Predict, Infer, Draw Conclusions	
Read and Comprehend Using a Variety of Strategies [Evaluative Comprehension]	Analytical Skills, Viewpoint	Analytical Viewpoint
Recognize author's viewpoint	Recognize Author's Viewpoint	
Distinguish fact from opinion	Distinguish Fact from Opinion	
Use analytical reasoning skills	Use Analytical Reasoning Skills	



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Use organizational features of printed text	Use Organizational Features of Printed Text	
Determine cause and effect, compare and contrast	Determine Cause and Effect, Compare and Contrast	

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Language Usage Goal Structure	Language Usage DesCartes	Language Usage Report Names
Write for a Variety of Purposes and Audiences: Prewriting	Writing Process: Prewrite	Writing: Prewrite
Conventions of language: concepts of print	Conventions of Language: Concepts of Print	
Identify and apply the steps of the writing process	Identify and Apply the Steps of the Writing Process	
Apply the steps of the writing process: prewriting	Apply the Steps of the Writing Process: Prewriting	
Awareness of intended audience	Awareness of Intended Audience	
Awareness of intended purpose	Awareness of Intended Purpose	
Write for a Variety of Purposes and Audiences: Drafting/Revising	Writing Process: Draft, Revise	Writing: Draft, Revise
Apply the steps of the writing process: drafting	Apply the Steps of the Writing Process: Drafting	
Use a variety of approaches to writing	Use a Variety of Approaches to Writing	
Apply the steps of the writing process: revising	Apply the Steps of the Writing Process: Revising	
Write compositions: clearly stated, central idea, supporting details, sequential order	Central Idea, Supporting Details, Sequential Order	
Write for a Variety of Purposes and Audiences: Editing/Publishing	Writing Process: Edit	Writing: Edit
Edit and proofread: punctuation and capitalization	Edit: Punctuation and Capitalization	
Edit and proofread: grammar and spelling	Edit: Grammar and Spelling	
Apply writing process: edit	Apply Writing Process: Edit	
Communicates Using Standard English: Grammatical Conventions	Grammatical Conventions	Grammatical Conventions
Understands parts of speech: nouns and pronouns	Uses Parts of Speech: Nouns and Pronouns	



Understands parts of speech: verbs	Uses Parts of Speech: Verbs	
Understands parts of speech: adjectives and adverbs	Uses Parts of Speech: Adjectives and Adverbs	
Understands parts of speech: conjunctions and prepositions	Uses Parts of Speech: Conjunctions, Prepositions	
Understands parts of speech: negatives and interjections	Uses Parts of Speech: Negatives and Interjections	
Understands parts of speech: phrases and clauses	Uses Parts of Speech: Phrases and Clauses	
Communicates using standard English: Mechanical Conventions	Mechanical Conventions	Mechanical Conventions
Demonstrates use of punctuation	Demonstrates Use of Punctuation	
Demonstrates use of capitalization	Demonstrates Use of Capitalization	
Spells accurately	Spells Accurately	
Communicates Using Standard English: Structure	Structure, Modes	Structure and Modes
Uses various modes of writing: narrative	Uses Various Modes of Writing: Narrative	
Uses various modes of writing: expository	Uses Various Modes of Writing: Expository	
Uses various modes of writing: persuasive	Uses Various Modes of Writing: Persuasive	
Uses various modes of writing: poetic	Uses Various Modes of Writing: Poetic	
Uses various modes of writing: personal	Uses Various Modes of Writing: Personal	
Uses various modes of writing: business	Uses Various Modes of Writing: Business	
Uses various modes of writing: research	Uses Various Modes of Writing: Research	
Employs specific organizational elements	Employs Organizational Elements	



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