Measures of Academic Progress (MAP) Maine State-Aligned Version 5

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 Operations	**Number and Operations**	**Number and Operations**
Demonstrates conceptual understanding of rational numbers with respect to: whole numbers, positive fractional numbers, benchmark percents, and decimals within the context of money and metric measurement*	Conceptual Understanding of Rational Numbers	
Demonstrates understanding of the relative magnitude of numbers by ordering, comparing, or identifying whole numbers, equivalent positive fractional numbers, decimals, benchmark percents within number formats, or integers in context using models or number lines*	Relative Magnitude of Numbers	
Demonstrates conceptual understanding of mathematical operations by adding and subtracting whole numbers, decimals and positive proper fractions*	Mathematical Operations: Add and Subtract	
Demonstrates conceptual understanding of mathematical operations by multiplying and dividing whole numbers*	Mathematical Operations: Multiply and Divide	

NWEA
Northwest Evaluation Association
Partnering to help all kids learn

Accurately solves problems involving multiple operations on whole numbers, fractions, and decimals, or the use of the properties of factors, multiples, prime, or composite numbers*	Problem Solving Using Multiple Operations	
Applies properties of numbers (odd, even, and divisibility) and field properties (commutative, associative, identity, and distributive) to solve problems and to simplify computations *	Field and Number Theoretic Properties	
Geometry and Measurement	**Geometry and Measurement**	**Geometry and Measurement**
Uses properties or attributes to identify, describe, classify, or distinguish among different types of two-dimensional shapes	Properties and Attributes of 2-D Shapes	
Uses properties or attributes to identify, describe, classify, or distinguish among different types of three-dimensional shapes	Properties and Attributes of 3-D Shapes	
Demonstrates conceptual understanding of congruency by matching congruent figures using reflections, translations, or rotations; as the result of composing or decomposing shapes; or using line symmetry to demonstrate congruent parts within a shape. Demonstrates conceptual understanding of similarity by describing the proportional effect on the linear dimensions of triangles and rectangles when scaling up or down while preserving angle measures, or by solving related problems (including applying scales on maps)	Congruency, Similarity, and Transformations	
Demonstrates conceptual understanding of perimeter and area of polygons, rectangles, right triangles, or irregular figures, and volume of rectangular prisms. Expresses all measures using appropriate units	Perimeter, Area, and Volume	
Measures and uses units of measures appropriately and consistently, and makes conversions within systems when solving problems involving length, weight, capacity, time, and temperature	Measurement, Units, and Conversions	
Demonstrates understanding of spatial relationships using location and position on a map or coordinate grid (all four quadrants); plotting points in four quadrants in context; and determining horizontal and vertical distances between points on a coordinate grid in the first quadrant	Spatial Relationships and Coordinate Grids	

Functions and Algebra	Functions and Algebra	Functions and Algebra
Identifies and extends to specific cases a variety of patterns (linear and nonlinear) and writes a rule in words or symbols for finding specific cases of a linear relationship. Demonstrates conceptual understanding of linear relationships (y = kx) as a constant rate of change	Patterns: Linear and Non-Linear	
Demonstrates conceptual understanding of algebraic expressions by using letters to represent unknown quantities in linear algebraic expressions or by evaluating linear algebraic expressions using whole numbers	Algebraic Expressions	
Demonstrates conceptual understanding of equality by showing equivalence between two expressions, by solving one-step linear equations, or by determining which values of a replacement set make the equation a true statement	Equality: Solving Linear Equations	
Data, Statistics, and Probability	**Data, Statistics, and Probability**	**Statistics and Probability**
Organizes, displays, and interprets a given representation to answer questions related to the data, to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems	Organize, Display, and Interpret Data	
Analyzes patterns, trends, or distributions in data in a variety of contexts by determining or using measures of central tendency (mean, median, or mode) or range to analyze situations, or to solve problems	Measures of Central Tendency and Range	
Uses counting techniques to solve problems in context involving combinations or simple permutations. For a probability event in which the sample space may or may not contain equally likely outcomes, predicts the likelihood of an event or determines the experimental or theoretical probability of an event and expresses the result as a fraction	Counting Techniques and Probability	

*Denotes that calculator use is not permitted in this goal or sub-goal of the test.

Measures of Academic Progress (MAP) Maine State-Aligned Version 5

Mathematics 6+ Goal Structure	Mathematics 6+ DesCartes	Mathematics 6+ Report Names
Number and Operations	**Number and Operations**	**Number and Operations**
Demonstrates conceptual understanding of rational numbers with respect to ratios, square roots of perfect squares, rates, proportional reasoning, absolute values, perfect square and cube roots, and percents*	Conceptual Understanding of Rational Numbers	
Demonstrates understanding of the relative magnitude of numbers by ordering or comparing numbers with whole number bases and whole number exponents, integers, rational numbers, common irrational numbers, rational bases with integer exponents, square roots, absolute values, or numbers represented in scientific notation using number lines or equality and inequality symbols*	Relative Magnitude of Numbers	
Demonstrates conceptual understanding of mathematical operations by adding and subtracting whole numbers, fractions, decimals, and integers *	Mathematical Operations: Add and Subtract	
Demonstrates conceptual understanding of mathematical operations by multiplying and dividing whole numbers, fractions, decimals, and integers *	Mathematical Operations: Multiply and Divide	
Accurately solves problems involving single or multiple operations on fractions or decimals, addition or subtraction of integers, percent of a whole, greatest common factor or least common multiple, raising numbers to whole number powers, determining square roots of perfect square numbers and non-perfect square numbers, proportional reasoning, percents involving discounts, tax, or tips, and rates	Problem Solving Using Multiple Operations	

NWEA
Northwest Evaluation Association
Partnering to help all kids learn

Applies properties of numbers (odd, even, remainders, divisibility, and prime factorization) and field properties (commutative, associative, identity, distributive, inverses) to solve problems and to simplify computations, and demonstrates conceptual understanding of field properties as they apply to subsets of real numbers *	Field and Number Theoretic Properties	
Geometry and Measurement	**Geometry and Measurement**	**Geometry and Measurement**
Uses properties or attributes of angles or sides to identify, describe, classify, or distinguish among different types of triangles or quadrilaterals. Makes and defends conjectures, constructs geometric arguments, uses geometric properties or theorems to solve problems involving angles, lines, polygons, circles, or right triangle ratios. Creates formal proofs of propositions. Applies the Pythagorean Theorem to find a missing side of a right triangle, or in problem solving situations	Properties and Attributes of 2-D Shapes	
Uses properties or attributes to identify, compare, or describe three-dimensional shapes including rectangular prisms, triangular prisms, cylinders, spheres, pyramids, and cones	Properties and Attributes of 3-D Shapes	
Demonstrates conceptual understanding of congruency by predicting and describing the transformational steps needed to show congruence and as the result of composing and decomposing two- and three-dimensional objects; and using line and rotational symmetry to demonstrate congruent parts within a shape. Applies concepts of similarity by solving problems involving scaling up or down and their impact on angle measures, linear dimensions and areas of polygons, and circles when the linear dimensions are multiplied by a constant factor	Congruency, Similarity, and Transformations	
Demonstrates conceptual understanding of perimeter, area, volume, and surface area; and demonstrates understanding of the relationships of circle measures by solving related problems. Expresses all measures using appropriate units	Perimeter, Area, Volume, and Surface Area	

Uses units of measure appropriately and consistently when solving problems; makes conversions within or across systems and makes decisions concerning an appropriate degree of accuracy in problem situations involving measurement	Measurement, Units, and Conversions	
Demonstrates conceptual understanding of spatial reasoning and visualization. Solves problems on and off the coordinate plane involving distance, midpoint, perpendicular and parallel lines, or slope	Spatial Relationships and Coordinate Grids	
Functions and Algebra	**Functions and Algebra**	**Functions and Algebra**
Identifies, extends, and generalizes a variety of patterns (linear and nonlinear) represented by models, tables, sequences, or graphs to solve problems. Demonstrates conceptual understanding of linear and nonlinear functions and relations	Patterns and Functions: Linear and Non-Linear	
Demonstrates conceptual understanding of algebraic expressions by solving problems involving algebraic expressions, by simplifying expressions, by evaluating expressions, or by translating problem situations into algebraic expressions	Algebraic Expressions	
Demonstrates conceptual understanding of equality by solving problems involving algebraic reasoning about equality; by translating problem situations into equations; by solving linear equations (symbolically and graphically) and expressing the solution set symbolically or graphically, or provides the meaning of the graphical interpretations of solution(s) in problem-solving situations; or by solving problems involving systems of linear equations in a context (using equations or graphs) or using models or representations	Equality: Solving Linear Equations and Systems	
Data, Statistics, and Probability	**Data, Statistics, and Probability**	**Statistics and Probability**

Organizes, displays, and interprets data using tables, line graphs, stem-and-leaf plots, scatter plots, circle graphs, bar graphs, box-and-whisker plots, histograms, and frequency charts to answer questions related to the data, to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems	Organize, Display, and Interpret Data	
Analyzes patterns, trends, or distributions in data in a variety of contexts by determining, using, or analyzing measures of central tendency (mean, median, or mode), dispersion (range or variation), outliers, quartile values, estimated line of best fit, regression line, or correlation (strong positive, strong negative, or no correlation) to solve problems; and solve problems involving conceptual understanding of the sample from which the statistics were developed	Measures of Central Tendency and Dispersion	
Uses counting techniques to solve contextualized problems involving combinations or permutations. Solves problems involving experimental or theoretical probability	Counting Techniques and Probability	

*Denotes that calculator use is not permitted in this goal or sub-goal of the test.

Measures of Academic Progress (MAP) Maine State-Aligned Version 5

Reading Goal Structure	Reading DesCartes	Reading Report Names
Early Reading, Word Identification, and Vocabulary Strategies	**Word Identification, Vocabulary**	**Word Identification**
Phonemic awareness and concepts of print: demonstrates phonemic awareness and applies phonological knowledge and skills by: recognizing pairs of rhyming words; counting syllables in 1 to 4-syllable words; demonstrates understanding of concepts of print by: distinguishing between printed letters and words; identifying the first and last parts of a word; identifying key parts of a book: front and back, print, illustrations; identifying title, author, illustrator	Phonemic Awareness and Concepts of Print	
Word identification skills and strategies: applies word identification and decoding strategies by: identifying and reading multi-syllabic words by using knowledge of sounds or word patterns	Word Identification Skills and Strategies	
Cues, context clues, word structure: identifies the meaning of unfamiliar vocabulary by using strategies to unlock meaning (e.g., using cues, using context clues, knowledge of word structure, including common base words and suffixes, or context clues, including illustrations and diagrams, common roots, or word origins	Cues, Context Clues, Word Structure	

NWEA
Northwest Evaluation Association
Partnering to help all kids learn

Synonyms, antonyms, homonyms, multiple meaning words: shows breadth of vocabulary knowledge, demonstrating understanding of word meanings or relationships by identifying synonyms and antonyms to connect new words to known words; homonyms/homophones; or categorizing words; selecting appropriate words to use including connotation or denotation, words with multiple meanings, shades of meanings of words/nuances, or idioms; organizing words by category	Synonyms, Antonyms, Homonyms, Multiple Meanings	
Initial Understanding of Literary Texts and Analysis and Interpretation of Literary Texts	**Understand, Analyze, Interpret Literary Texts**	**Literary Texts**
Literary elements: demonstrates initial understanding of elements of literary texts by identifying, describing, or making logical predictions about character, setting, problem/solution, or plots/subplots, as appropriate to text; or identifying any significant changes in character, relationships, or setting over time; or identifying rising action, climax, or falling action; analyze and interpret literary elements within texts by drawing conclusions based on interactions between characters or evolving plot; examining characterization, motivation, or interactions (including relationships), citing thoughts, words, or actions that reveal character traits, motivations, or changes over time; making inferences about cause/effect, internal or external conflicts or the relationship among elements within text	Literary Elements	
Locating information, sequencing, paraphrasing and summarizing: demonstrates initial understanding of elements of literary texts by responding to simple questions about a book's content; sequencing key events in order, as appropriate to text; paraphrasing or summarizing key ideas/plot, with events sequenced	Locating, Sequencing, Paraphrasing, Summarizing	

Characteristics of a variety of types of literary texts: demonstrates initial understanding of elements of literary texts by distinguishing between literary and informational texts; distinguishing among a variety of types of text; identifying the characteristics of a variety of types/genres of literary text (e.g., literary texts: poetry, plays, fairytales, fantasy, fables, realistic fiction, folktales, historical fiction, mysteries, science fiction, legends, myths, short stories, epics, novels, dramatic presentations, comedies, tragedies, satires, parodies, memoirs, epistles)	Characteristics of Types of Literary Texts	
Literary devices, author's purpose and craft: demonstrates initial understanding of elements of literary texts by identifying literary devices as appropriate to genre (e.g., similes, metaphors, alliteration, rhyme scheme, onomatopoeia, imagery, repetition, flashback, foreshadowing, personification, hyperbole, symbolism, allusion, diction, syntax, bias, or point of view); analyze and interpret literary elements within or across texts by explaining how the author's purpose (e.g., to entertain, inform or persuade) message or theme (which may include universal themes) is supported within the text; analyze and interpret author's craft within or across texts by demonstrating knowledge of author's style	Literary Devices, Author's Purpose and Craft	
Initial Understanding of Informational Text and Analysis and Interpretation of Informational Texts	**Understand, Analyze, Interpret Informational Texts**	**Informational Texts**

Text features, locating information: demonstrates initial understanding of informational texts (expository and practical texts) by obtaining information from text features [e.g., table of contents, glossary, index, transition words/phrases, transitional devices (including use of white space), bold or italicized text, headings, subheadings, graphic organizers, charts, graphs, or illustrations, maps, diagrams, tables, captions, timelines, citations, or transitional devices]; using information from the text to answer questions, perform specific tasks, or solve problems	Text Features, Locating Information	
Main idea, supporting details, relationships among facts, ideas, and events: demonstrates initial understanding of informational texts (expository and practical texts) by stating the main/central ideas; providing supporting details; organizing information to show understanding or relationships among facts, ideas, and events, paraphrasing, summarizing, comparing/contrasting, or connecting information with related ideas, etc.)	Main Idea, Supporting Details	
Characteristics of a variety of types of informational texts: demonstrates initial understanding of informational texts (expository and practical texts) by identifying the characteristics of a variety of types of text (e.g., reference, public documents, discourse, essays, articles, technical manuals, editorials/commentaries, primary source documents, periodicals, job-related materials, speeches, practical/functional, reports, magazines, newspapers, textbooks, biographies, autobiographies, recipes, advertisements, pamphlets, schedules)	Characteristics of Types of Informational Texts	

Synthesizing and evaluating text, author's purpose, cause and effect: analyzes and interprets informational text by synthesizing and evaluating information within text drawing inferences about text, including author's purpose (e.g., to inform, explain, entertain, persuade) or message; or explaining how purpose may affect the interpretation of the text; or using supporting evidence to form or evaluate opinions/judgments and assertions about central ideas that are relevant; making inferences about causes and effects; evaluating the clarity and accuracy of information (e.g. consistency, effectiveness of organizational pattern, or logic of arguments)	Synthesizing, Evaluating, Author's Purpose	
Reading Comprehension Strategies	**Reading Comprehension Strategies**	**Comprehension Strategies**
Predicting, inferring, and text structures: uses comprehension strategies during and after reading literary and informational text by predicting and making text based inferences; determining importance; locating and using text discourse features and elements to support inferences and generalizations about information (e.g., text structure, evidence, format, arguments used); or using cues for text structures (e.g., compare/contrast, proposition and support, classification, logical)	Predicting, Inferring, and Text Structures	

Measures of Academic Progress (MAP) Maine State-Aligned Version 5

Language Usage Goal Structure	Language Usage DesCartes	Language Usage Report Names
Structures of Language	**Structures of Language**	**Structures of Language**
Applying understanding of sentences: students demonstrate command of the structures of sentences, paragraphs, and text by using varied sentence length and structure to enhance meaning (e.g., including phrases and clauses)	Applying Understanding of Sentences	
Applying understanding of paragraph and text structures: students demonstrate command of the structures of sentences, paragraphs, and text by: using paragraph structures appropriately (e.g. indented format); recognizing organizational structures within paragraphs or within texts: description, sequence, chronology, proposition/support, compare/contrast, problem/solution, cause/effect, investigation, deductive/inductive; applying a format and text structure appropriate to purpose, audience, and context	Applying Understanding of Paragraphs	
Expressive (Narrative and Poetry) and Informational Writing (Reports, Procedures, or Persuasive Writing)	**Expressive and Informational Writing**	**Expressive and Informational**
Narrative strategies and poetry: students demonstrate use of narrative strategies to engage the reader by creating images, using relevant and descriptive details and sensory language; in writing poetry, students use language effectively by using rhyme, rhythm, meter, literary elements (e.g., setting, plot, characters) or figurative language: simile, personification, alliteration, onomatopoeia, metaphor; selecting and manipulating words, phrases, or clauses, for connotation/shades of meaning and impact; using a variety of poetic forms	Narrative Strategies and Poetry	

NWEA
Northwest Evaluation Association
Partnering to help all kids learn

Organizing, conveying, and elaborating information: students organize ideas/concepts by: selecting appropriate and relevant information (excluding extraneous details); writing a conclusion that provides closure; using transition words or phrases appropriate to organizing text structure; establishing a topic; stating and maintaining a focus/controlling idea/thesis; including facts and details relevant to focus/controlling idea or thesis, and excluding extraneous information; including sufficient details or facts for appropriate depth of information	Organizing, Conveying, Elaborating Information	
Writing Conventions – Applying Rules of Grammar, Usage	**Writing Conventions – Grammar, Usage**	**Grammar, Usage**
Applying rules of grammar: students demonstrate command of appropriate English conventions by applying rules of standard English usage to correct grammatical errors	Applying Rules of Grammar	
Applying rules of usage: students demonstrate command of appropriate English conventions by applying rules of standard English usage to correct grammatical errors (e.g., subject-verb agreement, pronoun-antecedent, consistency of verb tense, case of pronouns, irregular plurals, sentence fragments and run-ons)	Applying Rules of Usage	
Writing Conventions – Applying Rules of Mechanics	**Writing Conventions – Mechanics**	**Mechanics**
Applying rules of capitalization: students demonstrate command of appropriate English conventions by applying capitalization rules	Applying Rules of Capitalization	
Applying rules of punctuation: students demonstrate command of appropriate English conventions by applying appropriate punctuation to various sentence patterns to enhance meaning	Applying Rules of Punctuation	
Applying rules of spelling: students demonstrate command of appropriate English conventions by applying conventional and word-derivative spelling patterns	Applying Rules of Spelling	

Habits of Writing	Habits of Writing	Writing Habits
Using a writing process: students use a recursive process, including pre-writing, drafting, revising, editing, and critiquing to produce final drafts of written products	Using a Writing Process	
Writing extensively: students demonstrate the habit of writing extensively by: generating topics for writing, such as journal writing, free writes, poetry, quick writes, scientific observations, learning logs, readers'/writers' notebook and letters and personal notes reading response journals, reflective writing, short plays; writing in a variety of genres	Writing Extensively	