

# Measures of Academic Progress (MAP) Alaska State-Aligned Version 4

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.

<b>Mathematics 2-5 Goal Structure</b>	<b>Mathematics 2-5 DesCartes</b>	<b>Mathematics 2-5 Report Names</b>
<b>Numeration</b>	<b>Numeration</b>	<b>Numeration</b>
Understanding numbers: model, represent, compare and order, use equivalent representations with whole numbers*	Understanding Numbers: Whole Numbers	
Understanding numbers: model, represent, compare and order, and use equivalent representations with fractions, decimals, percent, and money*	Understanding Numbers: Fractions and Decimals	
Understanding meaning of operations and number theory: model, describe, explain, relate, apply with addition, subtraction, multiplication, and division of whole numbers; commutative and identity properties of addition and multiplication; skip counting; factors; multiples	Operations and Number Theory: Whole Numbers	
Understanding meaning of operations and number theory: model, describe, explain, relate, apply the meaning of addition and subtraction of fractions, decimals and money*	Operations and Number Theory: Fractions, Decimals	

<b>Measurement</b>	<b>Measurement</b>	<b>Measurement</b>
Measurable attributes and measurement techniques: estimate; use appropriate units; measure length, temperature, and weight/mass; convert within systems	Length, Temperature, Weight/Mass	
Measurable attributes and measurement techniques: estimate; use appropriate units; measure time and value of money; convert within systems	Time and Value of Money	
<b>Estimation and Computation*</b>	<b>Estimation and Computation</b>	<b>Estimation and Computation</b>
Estimation: use strategies with addition, subtraction, multiplication, and division of whole numbers; addition and subtraction of decimals and money	Estimation: Whole Numbers and Decimals	
Computation: addition and subtraction of whole numbers	Computation: Add and Subtract Whole Numbers	
Computation: multiplication and division of whole numbers	Computation: Multiply and Divide Whole Numbers	
Computation: addition and subtraction of fractions	Computation: Add and Subtract Fractions	
Computation: addition and subtraction of decimals and money	Computation: Add and Subtract Decimals	
<b>Functions and Relationships</b>	<b>Functions and Relationships</b>	<b>Functions and Relationships</b>
Describing patterns and functions: identify, generate, extend, complete, describe, state the rule for repeating and growing patterns in in-out tables, sequences, or problem situations	Patterns and Functions: Repeating and Growing	
Modeling and solving equations and inequalities: use and solve open sentences with one operation; use symbols for greater than, less than, and equal to	Equations and Inequalities: Open Sentences	

<b>Geometry</b>	<b>Geometry</b>	<b>Geometry</b>
Geometric relationships and constructions: identify, classify, compare, and draw points, lines, angles, and planes	Relationships, Constructions: Lines and Angles	
Geometric relationships and constructions: identify, classify, compare, and draw two-dimensional and three-dimensional figures including triangles, quadrilaterals, regular polygons, circles, rectangular prisms, pyramids, spheres, cylinders, cones	Relationships, Constructions: 2-D and 3-D Shapes	
Similarity, congruence, symmetry and transformations of shapes: identify figures that are congruent, similar or symmetrical; identifying the results of transformations (slides, turns, flips); identify tessellations and designs resulting from a series of transformations	Similar, Congruent, Symmetry, Transformations	
Perimeter, area, volume, and surface area: estimate and determine area and perimeter or circumference of rectangles, circles, and irregular shapes	Perimeter, Area, Volume, and Surface Area	
Position and direction: describe relative locations using directional terms; locate points on a grid using coordinates (1st quadrant)	Position, Direction: Points on a Grid	
<b>Statistics and Probability</b>	<b>Statistics and Probability</b>	<b>Statistics and Probability</b>
Data display: design an investigation; collect, organize, display, and explain data using bar graphs, Venn diagrams, line graphs, tables, charts, or diagrams	Data Display: Graphs, Tables, and Charts	
Central tendency: analyze data (comparing, explaining, interpreting, or justifying conclusions) by using mode, median, or range	Central Tendency: Mode, Median, and Range	
Probability: predict or explain the probability of all possible outcomes in an experiment using chance or certainty, likelihood, ratios, fractions to describe the probability	Probability: Predict Likelihood of Events	

\*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
<b>Numeration</b>	<b>Numeration</b>	<b>Numeration</b>
Understanding numbers: model, represent, compare and order, use equivalent representations with whole numbers*	Understanding Numbers: Whole Numbers	
Understanding numbers: model, represent, compare and order, and use equivalent representations with fractions, decimals, percent, and money*	Understanding Numbers: Fractions and Decimals	
Understanding numbers: model, represent, compare and order, and use equivalent representations with real numbers*	Understanding Numbers: Real Numbers	
Understanding meaning of operations and number theory: model, describe, explain, relate, apply with addition, subtraction, multiplication, and division of whole numbers; rules for order of operations; factors, multiples, LCM, GCF, rules of divisibility, primes, composites, prime factorization; count and add in different bases; problem solving	Operations and Number Theory: Whole Numbers	
Understanding meaning of operations and number theory: model, describe, explain, relate, apply the meaning and properties of addition, subtraction, multiplication, and division of fractions and decimals and money; rules for order of operations; the effects of arithmetic operations on rational numbers (fractions, decimals)*	Operations and Number Theory: Fractions, Decimals	
Understanding meaning of operations and number theory: model, describe, explain, relate, apply the meaning and properties of addition, subtraction, multiplication, division, exponents, and radicals with real numbers and variables; rules for order of operations on real numbers and variables; the effects of arithmetic operations on real numbers*	Operations and Number Theory: Real Numbers	

Measurement	Measurement	Measurement
Measurable attributes and measurement techniques: estimate; use appropriate units; measure length, temperature, weight/mass, volume/capacity; convert within and between systems	Length, Temperature, Weight/Mass, Volume/Capacity	
Measurable attributes and measurement techniques: estimate; use appropriate units; measure time, value of money, and angles; convert within and between systems	Time, Value of Money, and Angles	
Measurable attributes and measurement techniques: apply indirect methods including Pythagorean theorem, scale drawing, solving similar figures, and right triangle trigonometry	Indirect Methods: Similar and Right Triangles	
Estimation and Computation	Estimation and Computation	Estimation and Computation
Estimation: use and assess strategies for all computations with real numbers; problem solving*	Estimation: All Computations with Real Numbers	
Computation: addition and subtraction of whole numbers; rules for order of operations*	Computation: Add and Subtract Whole Numbers	
Computation: multiplication and division of whole numbers; rules for order of operations*	Computation: Multiply and Divide Whole Numbers	
Computation: addition, subtraction, multiplication and division of fractions; rules for order of operations*	Computation: All Computations with Fractions	
Computation: addition, subtraction, multiplication and division of decimals and money; rules for order of operations; converting between equivalent fractions, decimals, or percents*	Computation: All Computations with Decimals	
Computation: addition, subtraction, multiplication, and division real numbers (integers and rational numbers included) including scientific notation, exponents, and radicals; rules for order of operations; ratio and proportion; determining rate by using ratio and proportion	Computation: All Computations: Real Numbers	

<b>Functions and Relationships</b>	<b>Functions and Relationships</b>	<b>Functions and Relationships</b>
Describing patterns and functions: identify, generate, extend, complete, describe, state the rule for repeating and growing patterns in in-out tables, sequences, or problem situations	Describing Patterns: Repeating and Growing	
Describing patterns and functions: generalize relationships represented by functions and sequences in tables, graphs, and equations	Describing Functions: Tables, Graphs, Equations	
Modeling and solving equations and inequalities: write and evaluate expressions; write and solve linear and quadratic equations and linear inequalities; write and solve systems of linear equations and inequalities; problem solving	Expressions, Equations, Inequalities, Systems	
<b>Geometry</b>	<b>Geometry</b>	<b>Geometry</b>
Geometric relationships and constructions: identify, classify, compare, and draw points, lines, angles, and planes including angles formed by intersecting lines, parallel lines and a transversal, angles relating to circles and arcs, radii, chords, secants, and tangent lines, interior and exterior angles of polygons	Relationships, Constructions: Lines and Angles	
Geometric relationships and constructions: identify, classify, compare, and draw two-dimensional and three-dimensional figures including triangles, quadrilaterals, and irregular polygons, circles, rectangular prisms, triangular and right pyramids, spheres, cylinders, cones; isometric drawings and nets	Relationships, Constructions: 2-D, 3-D Shapes	
Similarity, congruence, symmetry, transformations of shapes: identify or use transformations to show figures that are congruent, similar or symmetrical; use proportionality and scale factor to solve problems involving similar shapes; identify the results of transformations (slides, turns, flips, dilations); identify tessellations and designs resulting from a series of transformations; use a coordinate plane or Euclidean geometry; problem solving	Similar, Congruent, Symmetry, Transformations	

Perimeter, area, volume, surface area: estimate and determine area and perimeter or circumference of polygons, circles, and irregular shapes; estimate and determine surface area and volume of rectangular and triangular prisms, pyramids, cylinders, cones, spheres, and compound solids; problem solving	Perimeter, Area, Volume, and Surface Area	
Position and direction: describe relative locations using directional terms; locate points on a grid using coordinates (all quadrants); graph line segments and determine lengths and midpoints	Position, Direction: Grid/Location and Distance	
<b>Statistics and Probability</b>	<b>Statistics and Probability</b>	<b>Statistics and Probability</b>
Data display: design an investigation; collect, organize, display, and explain data using bar graphs, Venn diagrams, line graphs, tables, charts, diagrams, frequency distributions, stem and leaf plots, scatter plots, histograms, and box and whisker plots using one, two, or more sets of data	Data Display: Graphs, Tables, Charts	
Central tendency: determine and use mode, median, range, or mean to determine and justify the best representation of the data; use a best-fit line to describe trends and make predictions about data	Central Tendency: Mean, Mode, Median, Range	
Probability: predict or explain the probability of all possible outcomes in an experiment using chance or certainty, likelihood, ratios, fractions to describe the probability; fair game analysis; systematic counting; determining and comparing theoretical and experimental probability; using simulations; simple, compound, dependent, or independent events	Probability: Theoretical and Experimental	

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Reading Goal Structure	Reading DesCartes	Reading Report Names
The student uses strategies to decode or comprehend meaning of words in text (Word Identification Skills)	Student Uses Strategies to Decode Meaning of Words	Decode Meaning of Words
The student uses strategies to decode or comprehend meaning of words in text by demonstrating understanding of concepts of print including: one to one matching, identifying whether words are the same or different; reading regularly spelled, multi-syllabic words using decoding skills, including knowledge of letter-sound relationships, phonics, rhyming words	Concepts of Print, Phonics, Rhyming Words	
The student uses strategies to decode or comprehend the meaning of words in text by using knowledge of word structure (root or base word, prefixes, suffixes), derivational roots and affixes, including cultural derivations	Word Structure, Derivational Roots and Affixes	
The student uses strategies to decode or comprehend the meaning of words in text by determining meanings of unfamiliar words in context; identifying words by using context clues; obtaining information using text features including text structure (e.g., graphs, charts) and text features (e.g., titles, illustrations, table of contents)	Words in Context; Text Features and Structures	



<p>The student uses strategies to decode or comprehend meaning of words in text by identifying relationships among words by categorizing (e.g., synonyms, antonyms, homophones, homographs), identifying shades of meaning (e.g., happy, ecstatic)] and analogies; identifying content-specific vocabulary, words with multiple meanings, or precise vocabulary, connotation/denotation</p>	<p>Synonyms, Antonyms, Homonyms, Analogy, Vocabulary</p>	
<p><b>The student comprehends literal or inferred meaning from text (Forming a General Understanding)</b></p>	<p><b>Student Comprehends Literal, Inferred Meaning</b></p>	<p><b>Literal Meaning, Inferred</b></p>
<p>The student comprehends literal or inferred meaning from text by answering who, what, where, and when questions; answering questions about information explicitly stated in text; locating information explicitly stated in narrative and informational text to answer literal-comprehension questions</p>	<p>Locates Information in Narrative, Informative Text</p>	
<p>The student comprehends literal or inferred meaning from text by making inferences (e.g., predicts logical outcomes); drawing conclusions based on information presented explicitly in the text (e.g., cause and effect, predictions)</p>	<p>Inferences, Predictions, Conclusions</p>	

The student restates/summarizes and connects information; demonstrates understanding of main ideas/arguments; follows written directions (Forming a General Understanding)	Student Summarizes; Main Ideas; Directions	Summarize/Main Idea; Direction
<p>The student restates/summarizes information by identifying the correct sequence of events in a story; restating and summarizing main ideas or events in correct sequence after reading a text (e.g., paraphrasing, or identifying accurate restatements and summaries of main ideas or events or generalizations of a text); the student follows multi-step directions by reading, understanding, and applying multi-step directions to perform complex procedures and tasks (e.g., filling out a sample income tax return or permanent fund dividend application); identifying the sequence of steps in directions</p>	<p>Summarizes Information, Sequence, Directions</p>	
<p>The student demonstrates an understanding of main idea by identifying the most important idea of a text; identifying or explaining the main ideas in various types of texts (i.e., recognizing or developing appropriate titles, assertions); locating information in narrative and informational text to answer questions related to main ideas or key details; locating references from the text that support understanding of a main idea; locating and using evidence from texts to assess the validity of an author's main ideas (e.g., is the reasoning logical) and adequacy of support (e.g., is there enough supporting evidence); using evidence from the text to evaluate the power, logic, reasonableness</p>	<p>Main Idea, Supporting Details, Validity</p>	

The student analyzes content and structure of genres; analyzes and evaluates literary elements and devices (Analysis of Content and Structure)	Student Analyzes Genre; Literary Element, Device	Lit. Element, Genre, Device
The student analyzes content and structure of genres by distinguishing between fiction and non-fiction, poetry and prose, short story, drama; identifying or explaining the characteristics of the four major genres of fiction: short story, drama, novel, and poetry	Four Major Genres of Fiction	
The student analyzes content and structure of genres by identifying use of literary elements and devices (i.e., dialogue, rhyme, alliteration, simile, metaphor, foreshadowing, personification, time sequence, imagery, repetition, allusion, symbolism, irony, hyperbole, or syntax)	Literary Devices	
The student analyzes literary elements and devices by identifying the setting, characters, problem and solution, plot, point of view, theme, tone	Literary Elements	
The student differentiates fact from opinion/critique the effectiveness of text (Analysis of Content and Structure)	Student Differentiates Fact/Opinion, Effectiveness	Fact/Opinion, Effectiveness
The student differentiates fact from opinion/critiques the effectiveness of text by identifying bias/propaganda; identifying or analyzing author's purpose (e.g., to narrate, inform, entertain, explain, persuade)	Bias/Propaganda; Author's Purpose	
The student analyzes content of text to differentiate fact and opinion by distinguishing fact from opinion in a text	Fact and Opinion	

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Language Usage Goal Structure	Language Usage DesCartes	Language Usage Report Names
<p>The student writes about a topic (Write Using a Variety of Forms)</p>	<p>Student Writes About a Topic</p>	<p>Student Writes about a Topic</p>
<p>The student writes about a topic by writing a story or composition with a beginning and middle and ending; with a thesis statement that identifies the focus or controlling idea for the entire composition; grouping ideas logically within the paragraph, placing paragraph breaks logically; using indents; using a variety of transitional words and phrases</p>	<p>Use Topic Statement; Idea Grouping; Paragraph Form</p>	
<p>The student writes about a topic by organizing ideas using appropriate structure to maintain the unity of the composition (e.g., chronology order, order of importance, comparison and contrast, cause and effect, classification and definition)</p>	<p>Use Text Structures</p>	
<p>Student writes for a variety of purposes and audiences (Write Using a Variety of Forms)</p>	<p>Student Writes for Variety of Purpose and Audience</p>	<p>Audience and Purpose</p>
<p>The student demonstrates understanding of elements of discourse (purpose, audience, form) when completing expressive (creative, narrative, descriptive), persuasive, research-based, informational writing</p>	<p>Understand Elements of Discourse</p>	
<p>The student writes for a variety of purposes and audiences by writing a narrative using elements of fiction to advance the plot (e.g., setting, character, conflict and resolution, dialogue, sensory details); writing an understandable story that incorporates literary devices</p>	<p>Write in a Variety of Narrative Forms</p>	



The student writes for a variety of purposes and audiences by using diagrams, charts or illustrations with captions or labels in research projects or extended reports; writing in a variety of nonfiction forms using appropriate information and structure (i.e., step-by-step directions, descriptions, observations, or report writing)	Write in a Variety of Non-fiction Forms	
<b>The student writes and edits using conventions of Standard English: structures &amp; usage</b>	<b>Student Applies Conventions of Structures &amp; Usage</b>	<b>Edit Structure Usage</b>
The student uses a variety of simple and complex sentence structures in written work; uses sentences including the conjunctions and, or, but, or because; writes a variety of sentences (i.e., statement, question, exclamation	Use a Variety of Sentence Structures	
The student writes and edits using conventions of Standard English by applying rules of usage (i.e., verb tense, subject/verb agreement, possessives, pronouns, adjectives, adverbs, sentence structure);	Apply Rules of Usage	
The student writes and edits using conventions of Standard English by proofreading and correcting grammar in finished written work	Apply Correct Grammar	
<b>The student writes and edits using conventions of Standard English: conventions of writing</b>	<b>Student Applies Conventions of Writing</b>	<b>Edit Writing Conventions</b>
The student writes and edits using conventions of Standard English by applying rules of spelling	Apply Rules of Spelling	

The student writes and edits using conventions of Standard English by applying rules of punctuation (i.e., quotation marks, apostrophes, semicolons, colons, hyphens, and parentheses); identifying and/or correcting mistakes in punctuation (i.e., end of sentences, commas in dates, salutations and closings in letters, and commas in a series)	Apply Rules of Punctuation	
The student writes and edits using conventions of Standard English by applying rules of capitalization	Apply Rules of Capitalization	
<b>The student revises writing and documents sources (Revise and Cite Sources)</b>	<b>Student Revises and Documents Sources</b>	<b>Revise/Cite Sources</b>
The student revises writing to improve style, word choice, sentence variety, and subtlety of meaning in relation to the purpose and audience; combine sentences for fluency	Revise Sentence Structure, Word Choice, Style	
The student revises logical progression of ideas and supporting information by reviewing content and organization; rearranging and/or adding details to improve focus, to support main ideas; and/or eliminating irrelevant details to improve quality and effectiveness of writing; clarifying thesis statement and/or topic sentence; by citing sources of information using a standard method of documentation (e.g., MLA style)	Revise Paragraph Structure; Cite Sources	