

# Measures of Academic Progress (MAP) New Hampshire 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>Number and Operations</b>	<b>Number and Operations</b>	<b>Number and Operations</b>
Demonstrates conceptual understanding of rational numbers (whole numbers, positive fractional numbers, decimals, benchmark percents)*	Conceptual Understanding of Rational Numbers	
Demonstrates understanding of the relative magnitude of numbers (whole numbers, positive fractional numbers, decimals, benchmark percents, integers)*	Relative Magnitude of Numbers	
Demonstrates conceptual understanding of mathematical operations (addition and subtraction of whole numbers, decimals, positive fractions); uses a variety of mental computation strategies (addition and subtraction of whole numbers); demonstrates the understanding of monetary value*	Mathematical Operations (Add, Subtract)	

Demonstrates conceptual understanding of mathematical operations (multiplication and division of whole numbers); Uses a variety of mental computation strategies (multiplication and division of whole numbers)*	Mathematical Operations (Multiply, Divide)	
Accurately solves problems (whole numbers, factors, multiples, prime or composite numbers, addition or subtraction of fractions (proper) and decimals)*	Problem Solving	
Makes estimates*	Estimation	
Applies properties of numbers and field properties to solve problems and to simplify computations (whole numbers)*	Properties of Numbers and Field Properties	
<b>Geometry and Measurement</b>	<b>Geometry and Measurement</b>	<b>Geometry and Measurement</b>
Use properties or attributes of angles or sides to identify, describe, or classify angles, polygons, objects, and circles	Properties or Attributes of Angles or Sides	
Uses properties or attributes to identify, compare, or describe three-dimensional shapes	Properties or Attributes of 3-D Shapes	
Demonstrates conceptual understanding of congruency; demonstrates conceptual understanding of similarity	Congruency and Similarity	
Demonstrates conceptual understanding of perimeter (polygons), area (rectangles and triangles), and volume (rectangular prisms)	Perimeter, Area, Volume	
Measures and uses units of measures appropriately and consistently, and makes conversions within systems when solving problems, determines elapsed and accrued time	Measurement, Units, Conversions, Time	
Demonstrates understanding of spatial relationships using location and position; demonstrates conceptual understanding of spatial reasoning and visualization	Spatial Relationships	

<b>Functions and Algebra</b>	<b>Functions and Algebra</b>	<b>Functions and Algebra</b>
Identifies and extends to specific cases a variety of patterns	Patterns	
Demonstrates conceptual understanding of algebraic expressions (whole numbers)	Expressions	
Demonstrates conceptual understanding of equality; Demonstrates conceptual understanding of linear relationships as a constant rate of change (whole numbers)	Equality and Linear Relationships	
<b>Data, Statistics, and Probability</b>	<b>Data, Statistics, and Probability</b>	<b>Data, Stats, Probability</b>
Interprets a given representation; organizes and displays data	Organizes, Displays, and Interprets Data	
Analyzes patterns, trends, or distributions in data	Patterns, Trends, or Distributions in Data	
Uses counting techniques; probability (predicts the likelihood of an event, determines experimental or theoretical probability)	Counting Techniques and Probability	

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

<b>Mathematics 6+ Goal Structure</b>	<b>Mathematics 6+ DesCartes</b>	<b>Mathematics 6+ Report Names</b>
<b>Number and Operations</b>	<b>Number and Operations</b>	<b>Number and Operations</b>
Demonstrates conceptual understanding of real numbers	Conceptual Understanding of Real Numbers	
Demonstrates understanding of the relative magnitude of real numbers	Relative Magnitude of Real Numbers	
Demonstrates conceptual understanding of mathematical operations (addition and subtraction of rational numbers); uses a variety of mental computation strategies (whole numbers, fractions, powers, percents); demonstrates the understanding of monetary value	Mathematical Operations (Add, Subtract)	
Demonstrates conceptual understanding of mathematical operations (multiplication and division of rational numbers); uses a variety of mental computation strategies (whole numbers, fractions, powers, percents)	Mathematical Operations (Multiply, Divide)	
Accurately solves problems (rational numbers)	Problem Solving	
Makes estimates*	Estimation	
Applies properties of numbers and field properties to solve problems and to simplify computations (rational numbers)	Properties of Numbers and Field Properties	
<b>Geometry and Measurement</b>	<b>Geometry and Measurement</b>	<b>Geometry and Measurement</b>
Use properties or attributes of angles or sides to identify, describe, or classify angles, polygons, objects, circles, intersecting or parallel lines	Properties or Attributes of Angles or Sides	
Applies theorems or relationships; creates formal proofs	Theorems or Relationships	
Uses properties or attributes to identify, compare, or describe three-dimensional shapes	Properties or Attributes of 3-D Shapes	

Demonstrates conceptual understanding of congruency; demonstrates conceptual understanding of similarity: applies the concepts of congruency; applies the concepts of similarity	Congruency and Similarity	
Demonstrates conceptual understanding of perimeter, area, volume, or surface area; applies trigonometric formulas	Perimeter, Area, Volume, Surface Area, Trig	
Measures and uses units of measures appropriately and consistently, and makes conversions within systems when solving problems, determines elapsed and accrued time; applies informal concepts of successive approximation, upper and lower bounds, and limits in measurement situations, and uses measurement conversion strategies	Measurement, Units, Conversions, Time	
Demonstrates understanding of spatial relationships using location and position; demonstrates conceptual understanding of spatial reasoning and visualization; solves problems on and off the coordinate plane	Spatial Relationships	
<b>Functions and Algebra</b>	<b>Functions and Algebra</b>	<b>Functions and Algebra</b>
Identifies and extends to specific cases a variety of patterns and generalizes a linear or nonlinear relationship; identifies arithmetic and geometric sequences and finds the nth term, then uses the generalization to find a specific term	Patterns, Linear and Nonlinear Relationships	
Demonstrates conceptual understanding of algebraic expressions	Expressions	

Demonstrates conceptual understanding of equality; demonstrates conceptual understanding of linear relationships as a constant rate of change and distinguishes between linear relationships and nonlinear relationships; demonstrates conceptual understanding of linear and nonlinear functions and relations	Equality, Linear, Nonlinear Relationships	
<b>Data, Statistics, and Probability</b>	<b>Data, Statistics, and Probability</b>	<b>Data, Stats, Probability</b>
Interprets a given representation; organizes and displays data	Organizes, Displays, and Interprets Data	
Analyzes patterns, trends, or distributions in data	Patterns, Trends, or Distributions in Data	
Uses counting techniques; probability (predicts and determines experimental or theoretical probability)	Counting Techniques and Probability	

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Reading Goal Structure	Reading DesCartes	Reading Report Names
<b>Early Reading, Word Identification, and Vocabulary Strategies</b>	<b>Word Identification, Vocabulary</b>	<b>Word Identification</b>
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	
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	
<b>Initial Understanding of Literary Texts and Analysis and Interpretation of Literary Texts</b>	<b>Understand, Analyze, Interpret Literary Texts</b>	<b>Literary Texts</b>

<p>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</p>	<p>Literary Elements</p>	
<p>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</p>	<p>Locating, Sequencing, Paraphrasing, Summarizing</p>	

<p>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)</p>	<p>Characteristics of Types of Literary Texts</p>	
<p>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</p>	<p>Literary Devices, Author's Purpose and Craft</p>	

Initial Understanding of Informational Text and Analysis and Interpretation of Informational Texts	Understand, Analyze, Interpret Informational	Informational Texts
<p>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</p>	<p>Text Features, Locating Information</p>	
<p>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.)</p>	<p>Main Idea, Supporting Details</p>	

<p>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)</p>	<p>Characteristics of Types of Informational Texts</p>	
<p>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)</p>	<p>Synthesizing, Evaluating, Author’s Purpose</p>	

Reading Comprehension Strategies	Reading Comprehension Strategies	Comprehension Strategies
<p>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)</p>	<p>Predicting, Inferring, and Text Structures</p>	

Language Usage Goal Structure	Language Usage DesCartes	Language Usage Report Names
<b>Structures of Language</b>	<b>Structures of Language</b>	<b>Structures of Language</b>
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	
<b>Expressive (Narrative and Poetry) and Informational Writing (Reports, Procedures, or Persuasive Writing)</b>	<b>Expressive and Informational Writing</b>	<b>Expressive and Informational</b>
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	

<p>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</p>	<p>Organizing, Conveying, Elaborating Information</p>	
<p><b>Writing Conventions – Applying Rules of Grammar, Usage</b></p>	<p><b>Writing Conventions – Grammar, Usage</b></p>	<p><b>Grammar, Usage</b></p>
<p>Applying rules of grammar: students demonstrate command of appropriate English conventions by applying rules of standard English usage to correct grammatical errors</p>	<p>Applying Rules of Grammar</p>	
<p>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)</p>	<p>Applying Rules of Usage</p>	

<b>Writing Conventions – Applying Rules of Mechanics</b>	<b>Writing Conventions – Mechanics</b>	<b>Mechanics</b>
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	
<b>Habits of Writing</b>	<b>Habits of Writing</b>	<b>Writing Habits</b>
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	