

# Measures of Academic Progress (MAP) Arkansas State-Aligned Version 3

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>
Students shall understand numbers, ways of representing numbers, relationships among numbers and number systems (number sense: whole numbers)	Number Sense: Whole Numbers	
Students shall understand numbers, ways of representing numbers, relationships among numbers and number systems (number sense: rational numbers)	Number Sense: Rational Numbers	
Students shall understand meanings of operations and how they relate to one another (properties of number operations: number theory)	Properties of Number Operations: Number Theory	
Students shall understand meanings of operations and how they relate to one another (properties of number operations: whole number operations)	Properties of Number Operations: Whole Numbers	
Students shall compute fluently and make reasonable estimates (numerical operations and estimation: computational fluency and application of computation: whole numbers - addition and subtraction)	Whole Numbers: Addition and Subtraction	

Students shall compute fluently and make reasonable estimates (numerical operations and estimation: computational fluency and application of computation: whole numbers - multiplication and division)	Whole Numbers: Multiplication and Division	
Students shall compute fluently and make reasonable estimates (numerical operations and estimation: computational fluency and application of computation: fractions)	Computation and Applications: Fractions	
Students shall compute fluently and make reasonable estimates (numerical operations and estimation: computational fluency and application of computation: decimals)	Computation and Applications: Decimals	
Students shall compute fluently and make reasonable estimates (numerical operations and estimation: estimation)	Estimation	
Students shall compute fluently and make reasonable estimates (numerical operations and estimation: application of computation)	Application of Computation	
<b>Algebra</b>	<b>Algebra</b>	<b>Algebra</b>
Students shall recognize, describe and develop patterns, relations and functions (patterns, relations, and functions)	Patterns, Relations, and Functions	
Students shall represent and analyze mathematical situations and structures using algebraic symbols (algebraic representations: expressions, equations, and inequalities)	Algebraic Representations	
Students shall develop and apply mathematical models to represent and understand quantitative relationships (algebraic models); students shall analyze change in various contexts (analysis of change)	Algebraic Models and Analysis of Change	
<b>Geometry</b>	<b>Geometry</b>	<b>Geometry</b>
Students shall analyze characteristics and properties of 2 and 3 dimensional geometric shapes and develop mathematical arguments about geometric relationships (geometric properties); students shall use visualization, spatial reasoning and geometric modeling (visualization and geometric models)	Geometric Properties and Models	
Students shall apply transformations and the use of symmetry to analyze mathematical situations (transformation of shapes)	Transformation of Shapes	

Students shall specify locations and describe spatial relationships using coordinate geometry and other representational systems (coordinate geometry)	Coordinate Geometry	
<b>Measurement</b>	<b>Measurement</b>	<b>Measurement</b>
Students shall use attributes of measurement to describe and compare mathematical and real-world objects; students shall identify and use units, systems and processes of measurement (physical attributes and systems of measurement: time, money, and temperature)	Time, Money, and Temperature	
Students shall use attributes of measurement to describe and compare mathematical and real-world objects; students shall identify and use units, systems and processes of measurement (physical attributes and systems of measurement: length, weight/mass capacity)	Length, Weight/Mass, Capacity	
Students shall use attributes of measurement to describe and compare mathematical and real-world objects; students shall identify and use units, systems and processes of measurement (physical attributes and systems of measurement: perimeter and area)	Perimeter and Area	
Students shall use attributes of measurement to describe and compare mathematical and real-world objects; students shall identify and use units, systems and processes of measurement (physical attributes and systems of measurement: surface area and volume)	Surface Area and Volume	
<b>Data Analysis and Probability</b>	<b>Data Analysis and Probability</b>	<b>Data Analysis and Probability</b>
Students shall formulate questions that can be addressed with data and collect, organize and display relevant data to answer them (data representation); students shall select and use appropriate statistical methods to analyze data (data analysis); students shall develop and evaluate inferences and predictions that are based on data (inferences and predictions)	Data Representation, Analysis, and Predictions	
Students shall understand and apply basic concepts of probability (probability)	Probability	

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Mathematics 6+ Goal Structure	Mathematics 6+ DesCartes	Mathematics 6+ Report Names
<b>Number and Operations</b>	<b>Number and Operations</b>	<b>Number and Operations</b>
Students shall understand numbers, ways of representing numbers, relationships among numbers and number systems (number sense: whole numbers)	Number Sense: Whole Numbers	
Students shall understand numbers, ways of representing numbers, relationships among numbers and number systems (number sense: rational numbers)	Number Sense: Rational Numbers	
Students shall understand meanings of operations and how they relate to one another (properties of number operations: number theory)	Properties of Number Operations: Number Theory	
Students shall understand meanings of operations and how they relate to one another (properties of number operations: whole number operations)	Properties of Number Operations: Whole Numbers	
Students shall understand meanings of operations and how they relate to one another (properties of number operations: rational operations)	Properties of Number Operations: Rational No.	
Students shall compute fluently and make reasonable estimates (numerical operations and estimation: computational fluency and application of computation: whole numbers - addition and subtraction)	Whole Numbers: Addition and Subtraction	
Students shall compute fluently and make reasonable estimates (numerical operations and estimation: computational fluency and application of computation: whole numbers - multiplication and division)	Whole Numbers: Multiplication and Division	
Students shall compute fluently and make reasonable estimates (numerical operations and estimation: computational fluency and application of computation: fractions)	Computation and Applications: Fractions	

Students shall compute fluently and make reasonable estimates (numerical operations and estimation: computational fluency and application of computation: decimals)	Computation and Applications: Decimals	
Students shall compute fluently and make reasonable estimates (numerical operations and estimation: computational fluency and application of computation: integers and rational numbers)	Computation, Applications: Integers, Rational	
Students shall compute fluently and make reasonable estimates (numerical operations and estimation: estimation)	Estimation	
Students shall compute fluently and make reasonable estimates (numerical operations and estimation: application of computation)	Application of Computation	
<b>Algebra</b>	<b>Algebra</b>	<b>Algebra</b>
Students shall recognize, describe and develop patterns, relations and functions (patterns, relations, and functions)	Patterns, Relations, and Functions	
Students shall represent and analyze mathematical situations and structures using algebraic symbols (algebraic representations: expressions, equations, and inequalities)	Algebraic Representations	
Students shall develop and apply mathematical models to represent and understand quantitative relationships (algebraic models); students shall analyze change in various contexts (analysis of change)	Algebraic Models and Analysis of Change	
<b>Geometry</b>	<b>Geometry</b>	<b>Geometry</b>
Students shall analyze characteristics and properties of 2 and 3 dimensional geometric shapes and develop mathematical arguments about geometric relationships (geometric properties); students shall use visualization, spatial reasoning and geometric modeling (visualization and geometric models)	Geometric Properties and Models	
Students shall apply transformations and the use of symmetry to analyze mathematical situations (transformation of shapes)	Transformation of Shapes	
Students shall specify locations and describe spatial relationships using coordinate geometry and other representational systems (coordinate geometry)	Coordinate Geometry	

<b>Measurement</b>	<b>Measurement</b>	<b>Measurement</b>
Students shall use attributes of measurement to describe and compare mathematical and real-world objects; students shall identify and use units, systems and processes of measurement (physical attributes and systems of measurement: time, money, and temperature)	Time, Money, and Temperature	
Students shall use attributes of measurement to describe and compare mathematical and real-world objects; students shall identify and use units, systems and processes of measurement (physical attributes and systems of measurement: length, weight/mass capacity)	Length, Weight/Mass, Capacity	
Students shall use attributes of measurement to describe and compare mathematical and real-world objects; students shall identify and use units, systems and processes of measurement (physical attributes and systems of measurement: perimeter and area)	Perimeter and Area	
Students shall use attributes of measurement to describe and compare mathematical and real-world objects; students shall identify and use units, systems and processes of measurement (physical attributes and systems of measurement: surface area and volume)	Surface Area and Volume	
<b>Data Analysis and Probability</b>	<b>Data Analysis and Probability</b>	<b>Data Analysis and Probability</b>
Students shall formulate questions that can be addressed with data and collect, organize and display relevant data to answer them (data representation); students shall select and use appropriate statistical methods to analyze data (data analysis); students shall develop and evaluate inferences and predictions that are based on data (inferences and predictions)	Data Representation, Analysis, and Predictions	
Students shall understand and apply basic concepts of probability (probability)	Probability	

## Measures of Academic Progress (MAP) Arkansas State-Aligned Version 3

Reading Goal Structure	Reading DesCartes	Reading Report Names
<b>Foundations of Reading/Vocabulary and Word Study: Students shall apply concepts of print, understand the relationship of speech to print, and acquire and apply skills in vocabulary development and word analysis to be able to read fluently and develop a foundation for literacy.</b>	<b>Foundations of Reading, Vocabulary, Word Study</b>	<b>Foundations of Reading</b>
Foundations of Reading: Utilize concepts of print and develop phonological awareness	Utilize Print Concepts, Phonological Awareness	
Vocabulary and Word Study: Acquire and apply skills in vocabulary development	Acquire Skills in Vocabulary Development	
Vocabulary and Word Study: Acquire and apply skills in word analysis and identify and explain meaning of figurative language	Apply Word Analysis, Figurative Language	
<b>Comprehension: Students shall apply a variety of strategies to read and comprehend printed material.</b>	<b>Connect, Question, Monitor, Infer</b>	<b>Connections</b>
Comprehension: Locate information; use literal and inferential understanding, make predictions, and draw conclusions to make meaning	Locate, Infer, Predict, Draw Conclusions	
Comprehension: Identify and interpret specific ways in which an author accomplishes purpose through organization, bias, persuasive techniques, and style	Infer Author's Purpose	
Comprehension: Make inferences about cause-effect relationships, compare and contrast, and distinguish among facts supported by evidence and opinions in text	Infer Relationships, Fact and Opinion	
Comprehension: Identify topic or main ideas and supporting evidence; use the text features to locate and recall information	Identify Main Ideas and Supporting Evidence	

Comprehension: Summarize and paraphrase texts and structures in informational and literary texts, including relationships among concepts and details; follow directions encountered in functional texts with an emphasis on sequence	Summarize, Paraphrase, Follow Directions	
<b>Comprehension: Students shall read, examine, and respond to a wide range of texts for a variety of purposes</b>	<b>Respond to a Variety of Texts</b>	<b>Variety of Texts</b>
Comprehension: Read a variety of practical and other informational texts for enjoyment, critical analysis, and evaluation	Read Practical and Informational Texts	
Comprehension: Read a variety of literature, poetry, and drama for enjoyment, critical analysis, and evaluation	Read Literature, Poetry, and Drama	

## Measures of Academic Progress (MAP) Arkansas State-Aligned Version 3

Language Usage Goal Structure	Language Usage DesCartes	Language Usage Report Names
<p><b>Students shall employ a wide range of strategies as they write and use different writing process elements appropriately.</b></p>	<p><b>Employ Strategies and Writing Process Elements</b></p>	<p><b>Writing Process Elements</b></p>
<p>Prewriting: Organize writing to convey a central idea by selecting and applying appropriate prewriting strategies such as brainstorming, note-taking, and gathering data and using such graphic organizers as webbing, mapping charts/graphs, Venn diagrams, and formal outlining with main topics and sub-topics.</p>	<p>Organize Writing: Prewriting</p>	
<p>Drafting: Use prewriting to draft paragraphs with emphasis on central idea, explanation, elaboration, unity, purpose, and audience; create well-developed paragraphs that include introduction, details, and conclusion.</p>	<p>Create Well-Developed Paragraphs: Drafting</p>	
<p>Revising: Revise content of writing for central idea, elaboration, unity, and organization; revise style of writing for selected vocabulary, selected information, sentence variety, tone, and voice; evaluate how well questions of purpose, audience, and genre have been addressed.</p>	<p>Revise Content and Style: Revising</p>	
<p>Purposefully shaping and controlling language: Use figurative language to shape and control language to affect readers and descriptive language to add interest to writing; embed literary language in writing; describe characters and setting; engage the reader by developing a lead and a sense of closure; personalize writing to convey voice in formal and informal pieces.</p>	<p>Use Figurative and Descriptive Language</p>	

Students shall demonstrate competency in writing for a variety of purposes, topics and audiences employing a wide range of forms.	Write for Purposes, Audiences, Topics, Forms	Purposes, Forms
Purposes and Audiences: Use effective rhetorical techniques and demonstrate understanding of purpose, speaker, audience, and form when completing expressive, persuasive, or literary writing assignments; use elements of discourse effectively when completing narrative, expository, persuasive, or descriptive writing assignments.	Write for Purposes and Audiences	
Topics and Forms: Write short stories and brief personal narratives; write poems using a variety of techniques/devices.	Write Stories, Personal Narratives, Poems	
Topics and Forms: Write brief expository descriptions of a real object, person, place, or event using some detail; write an informational paragraph, including a topic sentence, details, and conclusion; write using rhetorical strategies with special emphasis on definition, description, exemplification, process/analysis, cause/effect, comparison/contrast, classification.	Write Expository Descriptions	
Topics and Forms: Write thank you notes, friendly letters (identifying the five parts), invitations, and letters to authors; write a variety of work related documents such as memos, resume and letters that address audience needs, stated purpose, and context and use appropriate vocabulary, tone, and style.	Write Letters, Work Related Documents	
Topics and Forms: Write persuasive compositions that use logic to structure ideas and arguments, clarify and defend positions with precise and relevant evidence, use specific rhetorical devices to support assertions, and address readers' concerns, counterclaims, biases, and expectations.	Write Persuasive Compositions	

Accessing, Interpreting, and Evaluating the Credibility of Information: Establish a focus for research; evaluate sources to select those most reliable and appropriate to purpose and topic; assess and determine the credibility of authors; distinguish between fact and opinion; distinguish between primary and secondary sources; define plagiarism and cite quoted sources to avoid plagiarism.	Establish Focus for Research, Evaluate Sources	
<b>Students shall apply knowledge of Standard English conventions in written work; Apply grammatical conventions to edit for standard inflections, agreement, word meaning, and convention.</b>	<b>Apply Knowledge of Grammatical Conventions</b>	<b>Grammatical Conventions</b>
Sentence Formation: Use a variety of sentence structures, types, and lengths for effect in writing; use clauses (main, subordinate) and phrases, including verbal, to invert sentence order for emphasis and variety.	Use Sentence Structures, Clauses, Phrases	
Sentence Formation: Use knowledge of the parts of speech to construct effective sentences.	Use Knowledge of the Parts of Speech	
Usage: Employ standard English usage in writing, including subject-verb agreement, pronoun referents and parts of a sentence including subject/verb, direct/indirect object, predicate nominative/predicate adjective, objective complement, and pronoun case.	Employ Standard Usage, Agreement, Case	
Spelling: Use phonetic strategies to spell unknown words; use correct spelling for high frequency words; spell words by applying the correct spelling of roots, bases, and affixes; spell homonyms correctly in context and according to usage.	Apply Correct Spelling	
Capitalization: Apply conventional rules of capitalization in writing.	Apply Conventional Rules of Capitalization	
Punctuation: Apply the punctuation rules appropriately in writing.	Apply Punctuation Rules Appropriately	