

# Measures of Academic Progress (MAP) Kansas 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.

| <b>Mathematics 2-5 Goal Structure</b>  | <b>Mathematics 2-5 DesCartes</b>                | <b>Mathematics 2-5 Report Names</b> |
|--|---|-------------------------------------|
| <b>Number and Computation*</b>   | <b>Number and Computation</b>                   | <b>Number and Computation</b>       |
| Number sense: knows, explains, and uses equivalent representations for whole numbers   | Equivalent Representations: Whole Numbers       |                                     |
| Number sense: knows, explains, and uses equivalent representations for fractions, decimals, money, and integers                              | Equivalent Representations                      |                                     |
| Number sense: compares and orders whole numbers  | Compares and Orders: Whole Numbers              |                                     |
| Number sense: compares and orders fractions, decimals, and integers  | Compares, Orders: Fractions, Decimals, Integers |                                     |
| Number systems and their properties: identifies, models, reads, writes, identifies place value, counts forwards and backwards: whole numbers | Models, Identifies, and Counts: Whole Numbers   |                                     |
| Number systems and their properties: identifies, models, reads, writes, identifies place value: fractions, decimals and integers             | Model, Identify: Fractions, Decimals, Integers  |                                     |
| Number systems and their properties: identifies even, odd, prime and composite, GCF, LCM, Roman numerals                                     | Number Theory                                   |                                     |



|  |  |                 |
|--|--|-----------------|
| Number systems and their properties: demonstrates meaning and uses properties; commutative, zero property, property of one, associative, distributive, substitution, symmetric property  | Properties: Whole Numbers                        |                 |
| Estimation: uses various estimation strategies for whole number quantities, fractions, decimals, monetary amounts  | Estimation: Whole Numbers, Fractions, Decimals   |                 |
| Computation: performs, explains, and solves problems using addition and subtraction of whole numbers   | Computation: Whole Numbers; Add, Subtract        |                 |
| Computation: performs, explains, and solves problems using multiplication and division of whole numbers  | Computation: Whole Numbers; Multiply, Divide     |                 |
| Computation: performs, explains, and solves problems using addition and subtraction of decimals and fractions  | Computation: Decimals, Fractions; Add, Subtract  |                 |
| Computation: performs, explains, and solves problems using multiplication of decimals  | Computation: Decimals; Multiply                  |                 |
| <b>Algebra</b>   | <b>Algebra</b>                                   | <b>Algebra</b>  |
| Patterns: recognizes, describes, extends, develops and explains relationships in repeating and growing patterns  | Patterns: Repeating and Growing                  |                 |
| Variables, equations, and inequalities: explains and uses variables and symbols to represent unknown whole number quantities, solves one-step linear equations, recognizes ratios  | Variables, Equations, Inequalities: Whole Number |                 |
| Functions: states the mathematical relationships, finds the values, determines the rule, states the rule using function tables   | Functions: Whole Numbers                         |                 |
| <b>Geometry</b>  | <b>Geometry</b>                                  | <b>Geometry</b> |
| Geometric figures and their properties: recognizes and investigates properties of points and lines   | Properties of Points, Lines, and Angles          |                 |
| Geometric figures and their properties: recognizes and investigates properties of plane figures  | Properties of Plane Figures                      |                 |
| Geometric figures and their properties: recognizes and investigates properties of solid figures  | Properties of Solid Figures                      |                 |
| Measurement and estimation: determines and uses whole number approximation for length, width, weight and volume, converts within the customary and metric system, selects and uses appropriate measurement tools, units of measure, and degree of accuracy | Length, Width, Weight, and Volume                |                 |



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|---|---|-------------|
| Measurement and estimation: determines and uses whole number approximation for temperature and time, converts within the customary and metric system, selects and uses appropriate measurement tools, units of measure, and degree of accuracy  | Temperature and Time                            |             |
| Measurement and estimation: knows and uses perimeter and area formulas for squares and rectangles, and solves real-world problems   | Perimeter and Area                              |             |
| Transformational geometry: recognizes and performs transformations (reflection, rotation, translation) on a two-dimensional figure, recognize when an object is reduced or enlarged, makes scale drawings, identifies congruent objects   | Transformational Geometry                       |             |
| Geometry from an algebraic perspective: identifies and plots points as ordered pairs in the first quadrant of a coordinate plane  | Geometry from an Algebraic Perspective          |             |
| <b>Data</b>   | <b>Data</b>                                     | <b>Data</b> |
| Probability: lists all possible outcomes and represent probability of a simple event  | Probability: Simple Event                       |             |
| Statistics: collects data using different techniques, organizes and displays data, reads, interprets, and explains the results for pictographs, frequency tables, tally marks, bar and line graphs, Venn diagrams, line plots, charts and tables, circle graphs, single stem-and-leaf plots | Statistics: Collection, Display, Interpretation |             |
| Statistics: identifies, explains, and calculates minimum and maximum values, mean, median, mode, and range  | Statistics: Data Analysis                       |             |

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

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

| Mathematics 6+ Goal Structure  | Mathematics 6+ DesCartes                      | Mathematics 6+ Report Names   |
|--|---|-------------------------------|
| <b>Number and Computation</b>  | <b>Number and Computation</b>                 | <b>Number and Computation</b> |
| Number sense: knows, explains, and uses equivalent representations for whole numbers*  | Equivalent Representations: Whole Numbers     |                               |
| Number sense: knows, explains, and uses equivalent representations for real numbers and algebraic expressions*   | Equivalent Representations: Real Numbers      |                               |
| Number sense: compares and orders whole numbers*   | Compares and Orders: Whole Numbers            |                               |
| Number sense: compares and orders real numbers and algebraic expressions*  | Compares and Orders: Real Numbers             |                               |
| Number systems and their properties: identifies, models, reads, writes, identifies place value, counts forwards and backwards: whole numbers*  | Models, Identifies, and Counts: Whole Numbers |                               |
| Number systems and their properties: identifies, models, reads, writes, identifies place value: real numbers*  | Models, Identifies, and Counts: Real Numbers  |                               |
| Number systems and their properties: identifies even, odd, prime and composite, prime factors, GCF, multiples, LCM   | Number Theory                                 |                               |
| Number systems and their properties: demonstrates meaning and uses properties: commutative, associative, distributive, substitution, identity properties for addition and multiplication, inverse properties of addition and multiplication, symmetric property of equality, addition and multiplication properties of equality and inequalities, zero product property, additive and multiplicative inverse properties, transitive property, reflexive property using real numbers* | Properties: Real Numbers                      |                               |
| Estimation: uses various estimation strategies for real number quantities*   | Estimation: Real Numbers                      |                               |
| Computation: performs, explains, and solves problems using addition and subtraction of whole numbers*  | Computation: Whole Numbers; Add, Subtract     |                               |



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| Computation: performs, explains, and solves problems using multiplication and division of whole numbers*  | Computation: Whole Numbers; Multiply, Divide       |                 |
| Computation: performs, explains, and solves problems using addition and subtraction of decimals and fractions*  | Computation: Decimals, Fractions; Add, Subtract    |                 |
| Computation: performs, explains, and solves problems using multiplication and division of decimals and fractions*   | Computation: Decimals, Fractions; Multiply, Divide |                 |
| Computation: performs, explains, and solves problems using real numbers   | Computation: Real Numbers                          |                 |
| Computation: performs, explains, and solves problems using powers, roots, percents, and matrices using real numbers and algebraic monomial expressions  | Computation: Powers, Roots, Percents, Matrices     |                 |
| <b>Algebra</b>  | <b>Algebra</b>                                     | <b>Algebra</b>  |
| Patterns: recognizes, describes, extends, develops and explains relationships in repeating and growing patterns, arithmetic and geometric sequences and special patterns  | Patterns and Sequences                             |                 |
| Variables, equations, and inequalities: explains and uses variables, simplifies expressions, solves linear equations and inequalities, solves quadratic equations, solves systems of linear equations, solves radical equations, solves exponential equations, solves proportions | Variables, Equations, Inequalities: Real Numbers   |                 |
| Functions: evaluates and analyzes functions   | Functions: Real Numbers                            |                 |
| <b>Geometry</b>   | <b>Geometry</b>                                    | <b>Geometry</b> |
| Geometric figures and their properties: recognizes and investigates properties of points, lines, and angles   | Properties of Points, Lines, and Angles            |                 |
| Geometric figures and their properties: recognizes and investigates properties of plane figures   | Properties of Plane Figures                        |                 |
| Geometric figures and their properties: recognizes and investigates properties of solid figures   | Properties of Solid Figures                        |                 |
| Measurement and estimation: determines and uses whole number approximation for length, width, weight and volume, converts within the customary and metric system, selects and uses appropriate measurement tools, units of measure, and degree of accuracy                        | Length, Width, Weight, and Volume                  |                 |



|  |   |             |
|--|---|-------------|
| Measurement and estimation: determines and uses whole number approximation for temperature and time, converts within the customary and metric system, selects and uses appropriate measurement tools, units of measure, and degree of accuracy   | Temperature and Time                            |             |
| Measurement and estimation: measures angles, determines and uses real number approximations for perimeter and circumferences   | Angles, Perimeter, and Circumference            |             |
| Measurement and estimation: determines and uses real number approximations for area, surface area and volume   | Area, Surface Area, and Volume                  |             |
| Measurement and estimation: knows, explains, and uses ratios and proportions to describe rates of change   | Rates of Change                                 |             |
| Transformational geometry: describes and performs multiple transformations (reflection, rotation, translation, reductions, enlargement) on two- and three- dimensional shapes, use scale drawings  | Transformational Geometry                       |             |
| Geometry from an algebraic perspective: uses all four quadrants on the coordinate plane  | Geometry from an Algebraic Perspective          |             |
| <b>Data</b>  | <b>Data</b>                                     | <b>Data</b> |
| Probability: lists all possible outcomes and represent probability of simple and compound events, independent and dependent events, makes predictions and analyze decisions, compares theoretical and empirical probability  | Probability                                     |             |
| Statistics: recognizes valid and invalid data collection and sampling techniques, organizes and displays data, reads, interprets, and explains the results for pictographs, frequency tables, tally marks, bar and line graphs, Venn diagrams, line plots, charts and tables, circle graphs, stem-and-leaf plots, scatter plots, box-and-whisker plots, and histograms, explains how bias, measurement errors and display distortions can affect the interpretation of data, | Statistics: Collection, Display, Interpretation |             |
| Statistics: identifies, explains, and calculates minimum and maximum values, mean, median, mode, range, quartiles, interquartile range, line of best fit, and explains the effects of outliers   | Statistics: Data Analysis                       |             |

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

| Reading Goal Structure  | Reading DesCartes                                | Reading Report Names                 |
|---|--|--------------------------------------|
| <b>Reads and Comprehends Text Across the Curriculum [Word Meaning and Analysis]</b> | <b>Phonics, Vocabulary, Word Analysis</b>        | <b>Phonics, Vocab, Word Analysis</b> |
| Uses skills in alphabetics  | Skills in Alphabetics                            |                                      |
| Expands vocabulary: vocabulary and context clues                                    | Vocabulary and Context Clues                     |                                      |
| Expands vocabulary: structural analysis, compound nouns, contractions               | Vocabulary: Structural Analysis                  |                                      |
| Expands vocabulary: synonyms, antonyms, homophones, homographs                      | Synonyms, Antonyms, Homophones, Homographs       |                                      |
| Expands vocabulary: use of figurative language                                      | Expands Vocabulary: Use of Figurative Language   |                                      |
| <b>Reads and Comprehends Text Across the Curriculum [Literal]</b>                   | <b>Read to Identify Text, Locate Information</b> | <b>Identify Text, Locate Info</b>    |
| Identifies characteristics of text  | Identifies Characteristics of Text               |                                      |
| Follows directions and locates information  | Follows Directions and Locates Information       |                                      |
| Sequences events and information  | Sequences Events and Information                 |                                      |
| Retells main ideas and supporting details   | Retells Main Ideas and Supporting Details        |                                      |
| Summarizes  | Summarizes                                       |                                      |
| <b>Reads and Comprehends Text Across the Curriculum [Interpretive/Evaluative]</b>   | <b>Read and Comprehend Text</b>                  | <b>Read and Comprehend</b>           |
| Make inferences and draw conclusions, summarize implied main idea, events           | Make Inferences and Draw Conclusions             |                                      |
| Compares and contrasts information  | Compares and Contrasts Information               |                                      |
| Identifies and describes the author's purpose, techniques                           | Describes the Author's Purpose, Techniques       |                                      |
| Links causes and effects  | Links Causes and Effects                         |                                      |
| Analyzes text structure   | Analyzes Text Structure                          |                                      |



| <b>Reads and Comprehends Text Across the Curriculum [Evaluative]</b>   | <b>Evaluate Credibility, Validity</b>             | <b>Eval Validity, Credibility</b> |
|--|---|-----------------------------------|
| Distinguishes between fact and opinion                                 | Distinguishes Between Fact and Opinion            |                                   |
| Identifies the author's position                                       | Identifies the Author's Position                  |                                   |
| Recognizes propaganda, bias, stereotypes                               | Recognizes Propaganda, Bias, Stereotypes          |                                   |
| Evaluates credibility of information                                   | Evaluate Credibility of Information               |                                   |
| <b>Student Responds to a Variety of Text</b>                           | <b>Respond to a Variety of Text</b>               | <b>Respond to Text</b>            |
| Uses literary concepts to interpret and respond to text: elements      | Interprets and Responds to Text: Elements         |                                   |
| Uses literary concepts to interpret and respond to text: devices       | Interpret and Responds to Text: Devices           |                                   |
| Uses concepts to interpret and respond to text: author's point of view | Interprets and Responds to Author's Point of View |                                   |

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| Language Usage Goal Structure  | Language Usage DesCartes                     | Language Usage Report Names       |
|--|--|-----------------------------------|
| <b>Writes Effectively for a Variety of Audiences, Purposes, and Contexts [Prewriting]</b>        | <b>Audience, Purpose, and Context</b>        | <b>Audience, Purp, Context</b>    |
| Concepts of print  | Concepts of Print                            |                                   |
| Uses appropriate strategies to generate text   | Uses Appropriate Strategies to Generate Text |                                   |
| Writes with an awareness of purpose  | Writes with an Awareness of Purpose          |                                   |
| Writes with an awareness of audience   | Writes with an Awareness of Audience         |                                   |
| <b>Writes Effectively for a Variety of Audiences, Purposes, and Contexts [Drafting/Revising]</b> | <b>Structure and Organization</b>            | <b>Structure and Organization</b> |
| Arranges information within paragraphs   | Arranges Information Within Paragraphs       |                                   |
| Uses explicit techniques   | Uses Explicit Techniques                     |                                   |
| Uses a variety of sentence structures and lengths  | Uses a Variety of Sentence Structures        |                                   |
| Reinforces organizational structure  | Reinforces Organizational Structure          |                                   |
| <b>Writes Effectively for a Variety of Audiences, Purposes, and Contexts [Editing]</b>           | <b>Edits for Correctness</b>                 | <b>Edits for Correctness</b>      |
| Uses correct mechanics and punctuation   | Uses Correct Mechanics and Punctuation       |                                   |
| Uses correct grammar and usage   | Uses Correct Grammar and Usage               |                                   |
| Spells familiar and most unfamiliar words correctly  | Spells Words Correctly                       |                                   |
| Edits: conventions, sentences, paragraphs  | Edits: Conventions, Sentences, Paragraphs    |                                   |
| <b>Writes Effectively for a Variety of Audiences, Purposes, and Contexts [Format]</b>            | <b>Variety of Formats</b>                    | <b>Variety of Formats</b>         |
| Student writes narrative/poetic text   | Student Writes Narrative/Poetic Text         |                                   |
| Student writes expository text   | Student Writes Expository Text               |                                   |
| Student writes technical text  | Student Writes Technical Text                |                                   |
| Student writes persuasive text   | Student Writes Persuasive Text               |                                   |



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|--|------------------------------------|--------------------------|
| Student writes personal text   | Student Writes Personal Text       |                          |
| <b>Writes Effectively for a Variety of Audiences, Purposes, and Contexts [Grammar]</b> | <b>Grammar and Usage</b>           | <b>Grammar and Usage</b> |
| Uses correct grammar and usage: nouns/pronouns   | Uses Nouns and Pronouns            |                          |
| Uses correct grammar and usage: verbs  | Uses Verbs                         |                          |
| Uses correct grammar and usage: adjectives/adverbs                                     | Uses Adjectives and Adverbs        |                          |
| Uses correct grammar and usage: conjunctions/prepositions                              | Uses Conjunctions and Prepositions |                          |
| Uses correct grammar and usage: negatives/interjections                                | Uses Negatives and Interjections   |                          |
| Uses correct grammar and usage: phrases/clauses  | Uses Phrases and Clauses           |                          |