

Measures of Academic Progress (MAP) Kentucky 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.

Mathematics 2-5 Goal Structure	Mathematics 2-5 DesCartes	Mathematics 2-5 Report Names
Number Properties and Operations*	Number Properties and Operations	Number and Operations
Students will understand that numbers, ways of representing numbers, relationships between numbers and number systems are means of representing real-world quantities.	Numbers: Representation and Relationships	
Students will understand that meanings of and relationships among operations provide tools necessary to solve realistic problems encountered in everyday life. (Addition and Subtraction of Whole Numbers)	Addition and Subtraction of Whole Numbers	
Students will understand that meanings of and relationships among operations provide tools necessary to solve realistic problems encountered in everyday life. (Multiplication and Division of Whole Numbers)	Multiplication and Division of Whole Numbers	

Students will understand that meanings of and relationships among operations provide tools necessary to solve realistic problems encountered in everyday life. (Addition and Subtraction of Fractions and Decimals)	Addition and Subtraction of Fractions, Decimals	
Students will understand that meanings of and relationships among operations provide tools necessary to solve realistic problems encountered in everyday life. (Multiplication of Decimals)	Multiplication of Decimals	
Students will understand that computing fluently and making reasonable estimates increases the ability to solve realistic problems encountered in everyday life. (Estimation)	Estimation	
Measurement	Measurement	Measurement
Students will understand that there are two major measurement systems (U.S. Customary and metric) and either may be used to solve problems.	Measurement Systems and Problem Solving	
Students will understand that measurable attributes of objects and the units, systems and processes of measurement are powerful tools for making sense of the world around them.	Measurable Attributes, Units, and Processes	
Students will understand that appropriate techniques, tools and formulas are used to determine measurements.	Appropriate Techniques, Tools, and Formulas	
Students will understand that for each situation, there is an appropriate degree of accuracy in measurement.	Accuracy and Estimation	
Geometry	Geometry	Geometry
Students will understand that characteristics and properties of two-dimensional figures and three-dimensional objects describe the world and are used to develop mathematical arguments about geometric relationships and to evaluate the arguments of others.	Properties of 2- and 3- Dimensional Figures	

Students will understand that representational systems, including coordinate geometry, are means for specifying locations and describing spatial relationships and are organizers for making sense of the world around them.	Coordinate Geometry	
Students will understand that transformations and symmetry are used to analyze real-world situations (e.g., art, nature, construction and scientific exploration) and that shape and area are conserved during mathematical transformations (flips, slides and turns).	Transformations and Symmetry	
Students will understand that visualization, spatial reasoning and geometric relationships model real-world situations.	Geometric Relationships and Spatial Reasoning	
Data Analysis and Probability	Data Analysis and Probability	Data Analysis, Probability
Students understand that quantitative literacy is a necessary tool to be an intelligent consumer and citizen and that the collection, organization, interpretation and display of data can be used to answer questions.	Data Collection, Display, and Interpretation	
Students understand that the choice of data display can affect the visual message communicated and that inferences and predictions from data are used to make critical and informed decisions..	Inferences and Predictions from Data	
Students understand that for a given set of data, the measures of central tendency (mean and median) can be different.	Measures of Central Tendency and Range	
Students understand that probability can be used to make decisions or predictions or to draw conclusions.	Probability	

Algebraic Thinking	Algebraic Thinking	Algebraic Thinking
<p>Students will understand that patterns, relations and functions are tools that help explain or predict real-world phenomena; that numerical patterns can be written as rules that generate the pattern; that functions are used to analyze change in various contexts and model real-world phenomena; and that functions can be written in words, as a symbolic sentence or in a table.</p>	<p>Patterns, Relations, and Functions</p>	
<p>Students will understand that algebra represents mathematical situations and structures for analysis and problem solving and that real-world situations can be represented using mathematical models to analyze quantitative relationships. (Expressions, Equations, and Inequalities)</p>	<p>Expressions, Equations, and Inequalities</p>	

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

Mathematics 6+ Goal Structure	Mathematics 6+ DesCartes	Mathematics 6+ Report Names
Number Properties and Operations*	Number Properties and Operations	Number and Operations
Students will understand that numbers, ways of representing numbers, relationships between numbers and number systems are means of representing real-world quantities.	Numbers: Representation and Relationships	
Students will understand that meanings of and relationships among operations provide tools necessary to solve realistic problems encountered in everyday life. (Addition and Subtraction of Real Numbers)	Addition and Subtraction of Real Numbers	
Students will understand that meanings of and relationships among operations provide tools necessary to solve realistic problems encountered in everyday life. (Multiplication and Division of Real Numbers)	Multiplication and Division of Real Numbers	
Students will understand that computing fluently and making reasonable estimates increases the ability to solve realistic problems encountered in everyday life. (Estimation)	Estimation	
Students will understand that computing fluently and making reasonable estimates increases the ability to solve realistic problems encountered in everyday life. (Powers, Roots, Scientific Notation, Absolute Value)	Powers, Roots, Absolute Value	
Students will understand that proportional reasoning is a tool for modeling and solving problems encountered in everyday situations.	Ratio, Proportion, Percent, and Rate	

Measurement	Measurement	Measurement
Students will understand that there are two major measurement systems (U.S. Customary and metric) and either may be used to solve problems.	Measurement Systems and Problem Solving	
Students will understand that measurable attributes of objects and the units, systems and processes of measurement are powerful tools for making sense of the world around them and that numerical values associated with measurements of physical quantities must be assigned units of measurement or dimensions.	Measurable Attributes, Units, and Processes	
Students will understand that measurements are determined by using appropriate techniques, tools, formulas and degree of accuracy needed for the situation.	Appropriate Techniques, Tools, and Formulas	
Geometry	Geometry	Geometry
Students will understand that characteristics and properties of two-dimensional figures and three-dimensional objects describe the world and are used to develop mathematical arguments about geometric relationships and to evaluate the arguments of others.	Properties of 2- and 3- Dimensional Figures	
Students will understand that representational systems, including coordinate geometry, are means for specifying locations and describing spatial relationships and are organizers for making sense of the world around them.	Coordinate Geometry	
Students will understand that transformations and symmetry are used to analyze real-world situations (e.g., art, nature, construction and scientific exploration) and that shape and area are conserved during mathematical transformations (flips, slides and turns). Scale conserves shape, but changes size.	Transformations and Symmetry	
Students will understand that visualization, spatial reasoning and geometric relationships model real-world situations.	Geometric Relationships and Spatial Reasoning	

Data Analysis and Probability	Data Analysis and Probability	Data Analysis, Probability
Students understand that quantitative literacy is a necessary tool to be an intelligent consumer and citizen and that data analysis requires developing a plan for collecting, organizing and analyzing data in order to make decisions.	Data Collection, Display, and Interpretation	
Students understand that the choice of data display can affect the visual message communicated and that inferences and predictions from data are used to make critical and informed decisions..	Inferences and Predictions from Data	
Students will understand that for a given set of data or a graph, statistical measures (mean, median, mode, range) can be used to describe the distribution of the data.	Measures of Central Tendency and Range	
Students understand that probability can be used to make decisions or predictions or to draw conclusions.	Probability	
Algebraic Thinking	Algebraic Thinking	Algebraic Thinking
Students will understand that patterns, relations and functions are tools that help explain or predict real-world phenomena; that numerical patterns can be written as rules that generate the pattern; that functions are used to analyze change in various contexts and model real-world phenomena; and that functions can be written in words, as a symbolic sentence or in a table.	Patterns, Relations, and Functions	
Students will understand that algebra represents mathematical situations and structures for analysis and problem solving and that real-world situations can be represented using mathematical models to analyze quantitative relationships. (Expressions, Equations, and Inequalities)	Expressions, Equations, and Inequalities	

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Reading Goal Structure	Reading DesCartes	Reading Report Names
Forming a Foundation (Reading)	Forming a Foundation	Forming a Foundation
Students will demonstrate an understanding of concepts of print, phonological awareness, and word identification strategies	Word Identification	
Students will use a variety of reading strategies to understand vocabulary and texts: interpret the meaning of jargon, dialect; interpret and explain literal and non-literal meanings of words or phrases; use context clues to identify the correct meaning as the word is used; interpret idioms	Jargon, Dialect, Context Clues, Idioms	
Apply knowledge of synonyms to assist comprehension	Synonyms	
Apply knowledge of antonyms to assist comprehension	Antonyms	
Apply knowledge of homonyms/homophones, differences in meaning, compound words, or analogies to assist comprehension	Homonyms, Compound Words, Analogies	
Identify parts of words (e.g., prefixes, suffixes, base words, common roots) and apply their meanings to comprehend unfamiliar words	Parts of Words: Prefix, Suffix, Base Word, Root	
Developing an Initial Understanding (Reading): Students will demonstrate understanding of literary elements and literary passages/texts	Developing an Initial Understanding: Literary	Initial Under: Literary
Students will describe explicitly stated cause and effect relationships	Cause and Effect Relationships	
Students will paraphrase and summarize information from texts of various lengths	Paraphrase and Summarize	
Students will make text-based inferences and draw conclusions based on what is read; make predictions	Inferences, Conclusions, Predictions	
Describe major events/plot, setting or problem/solution	Major Events-Plot, Setting, Problem-Solution	

Identify characteristics of different types of literary texts; distinguish between fiction and non-fiction texts	Characteristics of Types of Literary Texts	
Explain the main ideas of a passage and identify the key ideas or information that support them	Main Ideas and Ideas That Support Them	
Developing an Initial Understanding (Reading): Students will demonstrate understanding of informational passages/texts	Developing an Initial Understanding: Information	Initial Under: Inform
Students will describe explicitly stated cause and effect relationships	Cause and Effect Relationships	
Students will paraphrase and summarize information from texts of various lengths	Paraphrase and Summarize	
Students will make text-based inferences and draw conclusions based on what is read; make predictions	Inferences, Conclusions, Predictions	
Locate key ideas, information, facts or details and use information from texts to accomplish a specific task or to answer questions	Locate Ideas; Accomplish a Task	
Use information from text to state and support central/main idea	State and Support Central-Main Idea	
Identify text features of different types of informational texts; use text features and visual information to understand texts	Identify Text Features; Use Text Features	
Interpreting Text (Reading): Students will demonstrate understanding of literary elements and literary passages/texts	Interpreting Text: Literary	Interpret Text: Literary
Use text structure cues to aid comprehension	Use Text Structure Cues to Aid Comprehension	
Identify author's purpose, author's message or theme	Identify Author's Purpose, Message, or Theme	
Identify traits of main characters, interpret possible motives, and explain a character's actions based on a passage; analyze the relationship between events in a story and a character's behavior	Identify Traits of Characters, Interpret Motives	

Identify use of author's craft as appropriate to genre; Demonstrating a Critical Stance (Reading): evaluate what is read, based on the author's word choice/language use, style, or use of literary elements	Identify Author's Craft; Evaluate What Is Read	
Interpreting Text (Reading): Students will demonstrate understanding of informational passages/texts	Interpreting Text: Information	Interpret Text: Inform
Use text structure cues to aid comprehension; explain the purposes of text features in different types of informational texts	Text Structure Cues; Purposes of Text Features	
Identify author's purpose, author's message; identify an author's opinion	Identify Author's Purpose, Message, Opinion	
Distinguish between informative or persuasive passages; identify use of persuasive techniques and propaganda techniques; Demonstrating a Critical Stance (Reading): analyze or evaluate the use of persuasive or propaganda techniques; evaluate the accuracy of information presented in texts	Persuasive and Propaganda Techniques; Accuracy	
Distinguish between facts and opinions found in texts	Distinguish Between Facts and Opinions	

Language Usage Goal Structure	Language Usage DesCartes	Language Usage Report Names
Writing Content and Writing Structure	Writing Content and Writing Structure	Writing Content and Structure
Writing Content: Students will write for a variety of authentic purposes and audiences: recognize and address needs of intended audience; adjust the writing style for intended audience; communicate through authentic literary forms to make meaning about the human condition; communicate through authentic transactive purposes for writing; Students will provide sufficient details for clear understanding	Writing Content: Purposes and Audiences	
Writing Structure: Students will use complete and correct sentences of various structures and lengths	Writing Structure: Sentence Structures	
Writing Structure: Students will develop analytical structures appropriate to purpose	Writing Structure: Analytical Structures	
Writing Structure: Students will apply structures of a variety of academic and work-related texts	Writing Structure: Structures of Texts	
Writing Structure: Idea Development: Students will establish a context, thesis and a controlling idea in the introduction; develop the piece sufficiently, arranging ideas with intent; and conclude the writing effectively; Students will create unified and coherent paragraphs; apply paragraph structures consistently and appropriately; Students will use a variety of transitional words/phrases	Writing Structure: Idea Development	
Writing Conventions: Word Choice and Language Usage	Writing Conventions: Word Choice, Language Usage	Conventions: Language Usage
Students will choose precise and descriptive language for clarity, richness and/or its effect on the reader	Precise and Descriptive Language	



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Students will apply correct grammar skills	Correct Grammar Skills	
Students will apply correct usage skills	Correct Usage Skills	
Writing Conventions: Capitalization, Punctuation, and Spelling	Writing Conventions: Mechanics and Spelling	Conventions: Mechanics
Students will apply correct mechanics: capitalization	Correct Mechanics: Capitalization	
Students will apply correct mechanics: punctuation	Correct Mechanics: Punctuation	
Students will apply knowledge of spelling rules	Knowledge of Spelling Rules	
Writing Process	Writing Process	Writing Process
Students will focus and prewrite: establish and maintain a controlling idea on a selected topic; determine the most appropriate form to meet needs of purpose and audience; generate ideas to support and develop a controlling idea; organize and present ideas by taking notes	Students Will Focus and Prewrite	
Students will revise: identify and develop topic sentences, making sure ideas are supported appropriately with relevant details and that sentences are in sequential order; insert new sentences and delete unnecessary ones; develop effective introductions and conclusions; eliminate redundant words; choose the most precise words available	Students Will Revise	
Students will edit: for appropriate language usage, sentence structure, spelling, capitalization, punctuation and proper documentation of sources	Students Will Edit	