

Measures of Academic Progress (MAP) Delaware 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.

Mathematics 2-5 Goal Structure	Mathematics 2-5 DesCartes	Mathematics 2-5 Report Names
Numeric Reasoning	Numeric Reasoning	Numeric Reasoning
Develop efficient strategies for counting; connect number words and numbers; sequence numbers; decompose and recompose whole numbers; describe whole numbers using place value structure; develop an understanding of fractions; connect number words for fractions with pictures and numerals; compare and order fractions; compare decimals; generate and connect equivalent forms of fractions, decimals and percents; use decimal notation to show the value of coins; describe numbers according to characteristics such as evens, odds, factors, multiples, and squares*	Number Sense	

Use a variety of strategies to solve combination and separation problems; use number sentences to represent number combinations; add and subtract numbers efficiently; use and apply various meanings of multiplication and division; master multiplication facts and the related division facts; multiply and divide by large numbers; estimate the results of operations on whole numbers; apply more than one operation to solve a word problem; demonstrate mastery of mental math strategies for multiplying numbers*	Operations: Whole Numbers	
Find $\frac{1}{3}$, and $\frac{1}{4}$, of a given set or area using models; add and subtract benchmark fractions and fractions with common denominators; find benchmark percents of numbers using physical models; add and subtract integers using familiar applications; add and subtract decimals using money models*	Operations: Fractions, Percent, Decimals, Integers	
Algebraic Reasoning	Algebraic Reasoning	Algebraic Reasoning
Sort objects by more than one attribute; create and extend patterns and then translate them into a rule or drawing; find a given term in an arithmetic sequence; interpret tables, graphs and real-world events based on how they change over time; record patterns of growth in tables and graphs	Patterns and Change	
Model situations in which there is a need to join, separate, compare, use part-part-whole, addition, subtraction, multiplication and division of whole numbers using objects, pictures, geometric models, and symbols; model problem situations with objects and use representations such as graphs, tables or equations to draw conclusions	Representations	
Represent the idea of an unknown quantity using a letter or a symbol; represent the idea of a variable as an unknown quantity using a letter or symbol; use equations to express mathematical relationships	Symbols	

Geometric Reasoning	Geometric Reasoning	Geometric Reasoning
<p>Name and sort solid and plane figures using several attributes; identify, analyze and classify two-dimensional shapes according to their properties; recognize and compare attributes and parts of three-dimensional shapes; identify and build a three-dimensional object from two-dimensional representation; recognize geometric shapes and structures in the environment; describe, reason, and draw the results of subdividing and combining shapes; identify and classify angles as acute, right, obtuse, or straight</p>	<p>Classification</p>	
<p>Find and name locations with simple relationships; describe distance in informal terms; describe location and movement using geometric vocabulary; explore symmetry; identify line symmetry in two-dimensional shapes; describe a motion or series of motions that will show that two shapes are congruent (e.g., flip, slide, turn); predict and describe the results of a slide, flip, or turn of two-dimensional shapes; use the coordinate system to specify locations and to describe paths between locations</p>	<p>Location and Transformation</p>	
<p>Compare the length of two objects by placing them side by side; measure and compare objects using standard measures and metric units; convert a measurement from feet to inches; identify combinations of coin to make one dollar; talk about the days of the week and the days of the month during calendar time; estimate how much time has passed during an event; find elapsed time; tell time to the nearest five minutes; use measuring tools to find the size of turn angles in degrees</p>	<p>Measurement: Length, Money, Time, Angles</p>	

Describe and compare volume/capacity of two objects; count the number of cubes it takes to fill a three-dimensional figure (volume); describe and compare the mass/weight of two objects ; compare the weight of two objects using a balance; estimate and then measure the mass of an object to the nearest whole unit; find the number of square units it takes to cover a geometric figure (area); find the distance around a geometric figure to the nearest 1/2, 1/4 or 1/10th of a unit (perimeter)	Measurement: Perimeter, Area, and Volume	
Quantitative Reasoning	Quantitative Reasoning	Quantitative Reasoning
Collect categorical and numerical data to answer a question; demonstrate a variety of informal and conventional techniques for representing and organizing categorical and numerical data (e.g., tallies, tables, pictographs, bar graphs); construct and use data displays (e.g., tables, scaled pictographs, line plots, bar graphs) in order to answer a question	Collect and Represent	
Interpret data by making simple comparisons, comparisons between frequencies of categorical data; interpret data by noting characteristics of the graph; describe a set of data as a whole, noting important features such as concentration of values, spread of the values, and extreme values; compare related data sets; find and use measures of center (mean, median, mode) and spread (range) to describe, summarize and interpret data	Analyze	
Explore events as likely or unlikely, possible or impossible, more likely or less likely; describe the outcomes of an experiment or event (e.g., possible/impossible, certain/uncertain, less likely/equally likely/more likely); list all possible outcomes (i.e. the sample space) for a probability experiment involving a simple event; conduct a probability experiment, represent the result as a number (fraction, decimal, percent) between 0 and 1, and draw conclusions from the results	Probability	

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

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

Mathematics 6+ Goal Structure	Mathematics 6+ DesCartes	Mathematics 6+ Report Names
Numeric Reasoning	Numeric Reasoning	Numeric Reasoning
Compare and demonstrate equivalence of fractions, decimals, percents, and real numbers; use scientific notation to represent numbers; compare and contrast the properties of numbers in the real number system; use proportional reasoning to express rates; compare integers on the number line; apply knowledge of integers to the coordinate plane; simplify numeric and symbolic expressions involving absolute value, square roots, exponents, and negative and fractional exponents*	Number Sense	
Use a variety of strategies to add, subtract, multiply, and divide fractions; multiply decimals to solve real-world problems; add, subtract, multiply, and divide integers; calculate the decimal equivalent of fractions; use ratios, proportions and percents to solve contextualized problems; calculate unit rate to solve real-world problems; apply proportional reasoning strategies to solve real-world problems*	Operations: Fractions, Percent, Decimals, Integers	
Perform computations with exponents, powers of 10, and scientific notation; use properties of the real number system to simplify expressions; use inverse operations to solve equations, powers, and their corresponding roots; perform addition, subtraction, and multiplication on polynomial expressions; perform addition, subtraction, and multiplication on irrational expressions*	Operations: Properties, Powers, & Real Numbers	
Algebraic Reasoning	Algebraic Reasoning	Algebraic Reasoning

<p>Use an expression or rule to describe patterns of change in numeric, and geometric patterns, linear, exponential, and quadratic functions; understand and compare graphs, tables, and equations within linear contexts; describe rate of change in tables, rules or graphs; apply and use an understanding of rates of change to solve real world problems; determine the slope of a line given two points on the line; describe and predict the effect of parameter changes on functions</p>	<p>Patterns and Change</p>	
<p>Connect different representations of the same situation to one another using tables, graphs, and rules; model and solve real-world linear situations, including linear inequalities, systems of equations and inequalities; determine if a given value is a solution to a given equation or inequality; estimate solutions to exponential and quadratic functions; interpret maximum and minimum values of functions in problem situations; understand the relationship between the zeros (roots) of a polynomial function and its factors; represent and analyze problem situations using matrices</p>	<p>Representations</p>	
<p>Apply the order of operations; solve linear equations, inequalities, systems of linear and non-linear equations and inequalities using a variety of strategies; evaluate an algebraic expression; use function notation to represent and evaluate functions; write equivalent forms of linear, quadratic, or exponential functions; solve everyday problems that can be modeled using linear, quadratic, polynomial, rational, exponential, logarithmic, and/or step functions, absolute value and square roots</p>	<p>Symbols</p>	
<p>Geometric Reasoning</p>	<p>Geometric Reasoning</p>	<p>Geometric Reasoning</p>

Classify 3-dimensional figures; use angle relationships created by intersecting and parallel lines; estimate, measure, and classify angles; apply angle relationships; identify and apply the properties of circles; demonstrate geometric relationships between the measures of angles and sides of triangles and other polygons; determine whether a triangle is a right triangle; justify whether two figures are similar or congruent	Classification	
Determine the results of multiple transformations and determine the transformations required to obtain the finished product from the original shape in the coordinate plane; represent reflections, rotations, translations, and demonstrate dilations on the coordinate plane; find unknown sides of similar triangle; stretch and shrink periodic functions by changing parameters; develop mathematical arguments to demonstrate similarity, congruence; use the Pythagorean Theorem	Location and Transformation	
Use appropriate units to measure a given quantity; use an angle ruler or protractor to measure angles; identify and find the measures of corresponding parts of similar figures; use trigonometric relationships to determine side lengths and angle measures of any triangle; use indirect measurement to find missing lengths of geometric figures; solve problems which require an understanding of the Pythagorean Theorem relationships; apply the distance and midpoint formulas	Measurement: Length, Angles, Trigonometry	
Find the area and circumference of circles; explore the effects of scaling on volume and surface area of rectangular prisms; find missing dimensions of a shape given the area, volume, or surface area; demonstrate an understanding of and apply formulas for area, surface area, and volume of geometric figures including prisms, pyramids, cones, spheres, and cylinders; use partitioning and formulas to find the surface area and volume of complex shapes	Measurement: Perimeter, Area, Volume	

Quantitative Reasoning	Quantitative Reasoning	Quantitative Reasoning
<p>Collect and organize numerical data in order to answer a question; use random sampling methods to collect the necessary information to answer questions; use permutations and combinations as counting techniques; construct displays of data for single data sets or in order to study the relationship between related data sets; describe the correspondence between data sets and their graphical displays; select and interpret the most appropriate display for a given purpose and set(s) of data</p>	<p>Collect and Represent</p>	
<p>Defend or dispute conclusions drawn from the interpretation of data by comparing sets of data; analyze the validity of statistical conclusions and the misuse of data; use discrete probability models to represent real world phenomena; describe the effect of changes in the data on the mean and median of the data set(s); find and use appropriate measures of center and spread to interpret data; describe the effect of outliers in both one-variable and two-variable contexts</p>	<p>Analyze</p>	
<p>Compare and make predictions based on theoretical and experimental probabilities; understand and use the addition rule to calculate probabilities; construct an appropriate sample space and apply principles of probability for a simple or compound event; define a sample space to compare probabilities using the Fundamental Counting Principle; compute the probability of both independent and dependent events; investigate and describe the difference between experimental probability and theoretical probability</p>	<p>Probability</p>	

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

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

Reading Goal Structure	Reading DesCartes	Reading Report Names
Using appropriate texts, students will be able to select and apply efficient, effective decoding skills and other word recognition strategies to comprehend printed texts	Decoding Skills and Word Recognition Strategies	Decoding Skills
Use phonological awareness and alphabetic principle	Phonological Awareness	
Apply and use the meanings of root words and affixes to determine the meaning of unknown words	Meanings of Root Words and Affixes	
Students will be able to develop an increasingly extensive vocabulary and actively seek the meaning of unknown words as an important facet of comprehending texts and messages	Vocabulary and Meaning of Unknown Words	Vocabulary
Use context clues to determine the meanings of words	Context Clues	
Use knowledge of synonyms, antonyms, homonyms, homographs, and multiple meaning words to determine the meanings of words	Synonyms, Antonyms, and Multiple Meaning Words	
Students will demonstrate an overall understanding of printed texts: literary text	Understanding of Printed Texts: Literary Text	Understanding Literary Text
Make predictions as needed and make inferences in literary text about content, events, characters, setting, and author's decisions, and identify the effect of point of view	Make Predictions and Inferences	
Identify the story elements and story structures of literary texts	Identify Story Elements and Structures	
Recognize and interpret figurative language and literary devices	Figurative Language and Literary Devices	
Understand the differences between genres	Understand the Differences Between Genres	
Retell a story and organize the important points of the text via summaries	Retell Stories and Summarize Important Points	
Identify the author's purpose and accept or reject the validity of the information	Author's Purpose and Validity of Information	

Compare information between and within texts, and discriminate between fact and opinion	Compare Information, Discriminate Fact and Opinion	
Students will demonstrate an overall understanding of printed texts: informative text	Understanding of Printed Texts: Informative Text	Informative Text
Make predictions as needed and make inferences in informative text	Make Predictions and Inferences	
Identify text features and structures of informative text	Identify Text Features and Structures	
Restate an informative text and organize the important points of the text via summaries	Restate Text and Summarize Important Points	
Identify the author's purpose and accept or reject the validity of the information	Author's Purpose and Validity of Information	
Compare information between and within texts, and discriminate between fact and opinion	Compare Information, Discriminate Fact and Opinion	
Students will be able to critically analyze and evaluate information and messages presented through print	Critically Analyze and Evaluate Information	Analyze and Evaluate Info
Connect and synthesize information from many sources, use critical and divergent thinking, and assimilate prior knowledge to draw conclusions	Synthesize Information and Draw Conclusions	
Evaluate texts and media presentations for bias and misinformation, and recognize a variety of persuasive and propaganda techniques and how they are used in a variety of forms (e.g., advertising, campaigns, news formats, etc.)	Recognize Bias and Persuasive Techniques	

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

Language Usage Goal Structure	Language Usage DesCartes	Language Usage Report Names
Writing Process, Audience, Purpose, Form: Writers will use written English appropriate for various purposes and audiences and produce examples that illustrate the following discourse classifications: persuasive, informative, and expressive	Writing Process, Audience, Purpose, Form	Writing Process
The writing process: writing is a flexible, recursive process that encompasses identifying purposes and audiences, prewriting, drafting, revising, editing, and publishing	The Writing Process	
Audience and purpose: students understand that writing has an intended audience, and students understand that persuasive writing is audience-centered, that informative writing is subject-centered, and that expressive writing is author-centered	Audience and Purpose	
Persuasive, informative, and expressive writing forms	Form: Persuasive, Informative and Expressive	
Development and Organization: Writers will produce texts that exhibit development and organization consistent with the genre and purpose of the writing	Development and Organization	Development, Organization
Development: present/select a main idea/position using appropriate primary and secondary sources	Development: Main Idea	
Development: provide details to elaborate or clarify the subject or to support the position	Development: Details	
Development: use appropriate persuasive and narrative techniques including vivid language to elaborate details	Development: Techniques	
Organization: use a variety of genres, logically order ideas, and use transition words	Organization	

Sentence Structure and Word Choice: Writers will produce texts that exhibit sentence formation and word choice consistent with the genre and purpose of the writing	Sentence Structure and Word Choice	Sentences, Word Choice
Sentence structure: in order to capture the audience’s attention and establish a distinctive style, tone, and voice, use complete sentences, vary sentence structure, vary kinds of sentences	Sentence Structure: Complete, Varied	
Sentence structure: vary sentence lengths and sentence beginnings, and write sentences that create rhythm and flow naturally	Sentence Structure: Rhythm and Flow	
Word choice: use vivid and precise words with audiences’ needs and writer’s purpose, style, and voice in mind; use specific, concrete language and phrasing; use a purposeful range of formal/informal and non-literal language depending on the audience	Word Choice	
Conventions: Use standard written English conventions to achieve purpose and create effective style and voice; deviations from standard written English should have a specific rhetorical function	Conventions	Conventions
Capitalization: use capital letters to indicate beginning of sentences, proper nouns, the pronoun “I,” and abbreviations	Capitalization	
Punctuation: use periods, question marks, and exclamation marks appropriately; use commas in letter headings/greetings/closings, in addresses, in compound sentences, and items in a series; use commas after introductory clauses; use punctuation to show increasingly abstract relationships	Punctuation	
Grammar and usage: control agreement of subject/verb, more complex pronoun/antecedent; control verb and pronoun use	Grammar and Usage	
Conventional spelling: use with commonly misspelled words, homophones, homographs, homonyms, and frequently used words	Conventional Spelling	