
Minnesota Comprehensive Assessments – Series III

Mathematics
Reading
Science

Achievement Level
Descriptors

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Minnesota Department of
Education 

Minnesota Comprehensive Assessments – Series III
Achievement Level Descriptors
for
Mathematics, Grades 3–8 and 11
Reading, Grades 3–8 and 10
Science, Grades 5, 8 and High School

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Achievement Level Descriptors for the Minnesota Assessments

Overview

The Series III Minnesota assessments are based on the most recent academic content standards in Mathematics, Reading and Science. The academic standards are revised according to a schedule set forth by statute M.S. 120B.023. Two or three years after standards are revised and adopted, a new series of assessments is ready for operational administration. The Grade 11 Mathematics assessments were an exception to this timeline. Their implementation was delayed to allow students who were in Grade 8 at the time new standards were adopted in 2007 to take a grade 11 Mathematics assessment based on the 2003 standards. Most of these students' instruction prior to the grade 11 assessment was based on the 2003 standards. The schedule of standards revisions and first administrations of new assessments is shown in Table 1.

Table 1: Standards and assessments revision schedule

Activity	Mathematics	Science	English Language Arts
Standards revision	2006–2007	2008–2009	2009–2010
First operational administration of Series III assessments	Spring 2011: Grades 3–8 Spring 2014: Grade 11	Spring 2012: Grades 5, 8 and High School	Spring 2013: Grades 3–8 and 10 Reading assessment

Achievement Levels

Following the first administration of new assessments, the Minnesota Department of Education must convene content area experts and stakeholders to determine, through a standard setting process, the levels of performance that are reported to students, parents and schools. Standard setting committees set the cut scores that delineate four levels of achievement on Minnesota statewide assessments. The achievement levels for the Minnesota assessments are:

- Exceeds the Achievement Standards
- Meets the Achievement Standards
- Partially Meets the Achievement Standards
- Does Not Meet the Achievement Standards

Students who achieve the “Meets” and “Exceeds” levels are considered proficient with regard to the knowledge, skills and abilities (KSAs) described in the academic standards, or in the case of alternate assessments, the extended standards presented in the test specifications.

The Achievement Level Descriptors (ALDs) for the Minnesota assessments provide a description of grade-level student performance for each of the achievement levels. The standards outline the goals teachers and students work toward over the course of an academic year. The Minnesota assessments measure students' attainment of these goals, and the ALDs explain grade-level student performance in each level of achievement based upon assessment results. Students who are proficient on the Minnesota assessments are considered to be on a trajectory for postsecondary success, and this high

expectation is reflected in the ALDs for performance in the “Meets” and “Exceeds” achievement levels. Students who are proficient by this measure are on a path to leave high school well prepared for the next phase of their education, training or entrance in the workforce.

There is a range of student performance represented within each achievement level described by the ALDs. As they wrote the descriptors for each grade and at each achievement level, the ALD development team members envisioned a student whose performance falls in the middle of the range. To capture the KSAs that differentiate student performance at one level from another, it was also necessary to keep in mind the upper and lower thresholds of the range within an achievement level in order to adequately distinguish the level from adjacent levels.

Development of the Achievement Level Descriptors

The ALD development teams included Minnesota Department of Education (MDE) staff with expertise in academic content standards and in assessment. The teams sought the advice of Minnesota educators when needed. After the teams wrote draft ALDs, the drafts were submitted for review to HumRRO, an independent organization. HumRRO has done extensive work in the evaluation of achievement and performance level descriptors, as well as the alignment of test items to content standards. A revised draft of the ALDs and HumRRO’s evaluation were then presented to Minnesota’s Technical Advisory Committee for review. If necessary, the draft ALDs were further revised to incorporate recommendations from the Technical Advisory Committee. This was the version used during the standard setting process.

Because the ALDs are essential to the standard setting process, the ALD development teams relied primarily on the academic standards and the test specifications to create the descriptions of student performance. Several questions were critical to the process:

- To what degree do students master each of the standards at each of the achievement levels?
- For which KSAs is it possible to describe gradations of performance across four levels and for which KSAs is it not feasible?
- How, according to the test specifications, are students able to show their mastery of KSAs?

By keeping these questions in mind, the ALD developers are certain they created descriptors that can be supported by evidence in the test design and in student performance on both statewide and classroom assessments. Understanding how test items can tease out partial mastery of standards and benchmarks is vital to the process of creating ALDs. Variables that can be managed in test items include the degree of specificity or abstraction to which students must drill down, the amount of scaffolding provided directly or through carefully chosen wording, and the alignment to measures of cognitive complexity. It is also necessary to understand how the level of granularity of standards and benchmarks determines the extent to which they can be described across a continuum of performance levels. It is possible to distinguish four levels of performance in many benchmarks, but in others it is not. For example, for some benchmarks, we expect students to demonstrate mastery at the “Meets” level and the KSAs of the benchmarks will not be carried through to the “Exceeds” descriptor. In another instance, a benchmark may not lend itself to fine distinctions in levels of performance. In this case, the KSAs of the benchmark may appear only at the “Meets” level, and students are either able to do it or not. In Reading, ALDs may

repeat across grades as a result of more rigorous text complexity across grades and does not suggest laxity in performance expectations.

The ALD development team drafted the ALDs over the course of multiple working sessions. During these sessions, the team referred frequently to the academic standards and the test specifications, as noted above. With the exception of the alternate assessments, teams also relied on the language of Webb's Depth of Knowledge scale to describe cognitive complexity. The ALD team began work on each grade level by first describing performance that "Meets the Standards." The "Meets" level separates proficient performance from performance that is partially proficient or not proficient. Because the assessments are targeted to make the distinction between proficient and less than proficient, there is more evidence of student performance to draw upon at this achievement level. It is also important to develop an accurate description of the "Meets" level since it is critical for purposes of accountability. After describing "Meets the Standards," the ALD team turned its attention to "Exceeds the Standards," and then worked its way down the scale to "Partially Meets" and "Does Not Meet."

The draft ALDs that resulted from these sessions were subsequently reviewed and revised by MDE's assessment specialists to ensure that each team's intentions and commentary were accurately reflected in the descriptors. They also reviewed the articulation of the descriptors across achievement levels within a grade as well as the articulation of each of the four achievement levels across grades. In other words, did descriptions of what students know and can do increase appropriately from "Does Not Meet the Achievement Standards" to "Exceeds the Achievement Standards" within a grade? And did descriptions of what students know and can do at a level such as "Meets the Achievement Standards" increase appropriately across the grades?

Finalizing the ALDs

The ALDs were presented to standard setting committees as a policy document following the first operational administration of a new assessment. It is the State's intention that students who achieve a given proficiency level can demonstrate the knowledge, skills and abilities described in these ALDs, and the purpose of standard setting is not to review or revise the ALD document but to apply it in the determination of cut scores. The standard setting committees were required to create threshold or "just barely meets" descriptors from these ALDs and to apply them to the performance they saw demonstrated in the standard setting materials. The threshold descriptors and the associated cut scores represent the minimum performance required to meet a given achievement level's expectations. The committees recommended no substantive changes to the performance descriptions at each level of the ALDs while engaged in the process of creating threshold descriptors and setting cut scores. The ALDs were finalized when the Commissioner of Education approved the cut scores recommended by the standard setting committees.

Achievement Level Descriptors

Minnesota Comprehensive Assessments – Series III (MCA)

Mathematics, Grades 3–8

Standards revision:	2007
First operational test administration:	Spring 2011
Achievement Level Descriptors approved:	July 2011

Grade 3 Mathematics MCA-III Achievement Level Descriptors

Does Not Meet the Standards

Grade 3

A student at this level of mathematics succeeds at few of the most fundamental mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Number & Operation

- Represents whole numbers with words
- Adds multi-digit whole numbers
- Matches fractions with correct area model

Algebra

- Recognizes additive patterns in lists of numbers
- Recognizes basic facts represented in number sentences

Geometry & Measurement

- Recognizes parallel lines
- Matches a picture to the name of a familiar polygon (pattern blocks)
- Knows to use a ruler to measure distance
- Knows the value of coins
- Reads a thermometer

Data Analysis

- Reads data from a bar graph

Partially Meets the Standards

Grade 3

A student at this level of mathematics partially meets the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Number & Operation

- Represents whole numbers up to 1,000 using expanded notations
- Compares whole numbers up to 100,000
- Subtracts multi-digit whole numbers without regrouping
- Knows common multiplication and division facts (2s, 5s, 10s)
- Writes fractions for a given representation, including number line

Algebra

- Identifies next number in a pattern
- Represents simple situations with a number sentence involving basic facts and an isolated unknown

Geometry & Measurement

- Names and describes polygons based on a familiar pictorial orientation by counting number of sides
- Determines perimeter using additive model

Data Analysis

- Matches set of data with data display (e.g., table or graph)

A student at this level of mathematics meets the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Number & Operation

- Compares and represents whole numbers up to 100,000
- Solves real-world and mathematical problems using addition and subtraction
- Represents multiplication and division in various ways (reference MN Academic Standards 3.1.2.3)
- Compares and orders fractions with common denominators

Algebra

- Continues patterns to a specified term (e.g., given first three terms in a pattern, finds sixth term)
- Represents real-world situations with a number sentence involving basic facts and an unknown

Geometry & Measurement

- Identifies parallel and perpendicular lines
- Calculates perimeter
- Makes correct change from a dollar
- Tells time from an analog clock
- Determines elapsed time within an hour
- Solves problems involving reading a thermometer and calculating temperature

Data Analysis

- Interprets bar graphs, pictographs, and tally charts

A student at this level of mathematics exceeds the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated very consistently may include:

Number & Operation

- Solves real-world and mathematical problems using addition, subtraction, and multiplication
- Understands that the size of a fractional part is relative to the size of the whole

Algebra

- Conceptual understanding of pattern (e.g., recognizes input-output relationship)
- Interprets number sentences involving unknowns

Geometry & Measurement

- Distinguishes between parallel and perpendicular lines in a shape
- Has a conceptual understanding of perimeter
- Determines elapsed time and does not require a graphic

Data Analysis

- Translates between data and data displays in a variety of situations

Grade 4 Mathematics MCA-III Achievement Level Descriptors

Does Not Meet the Standards

Grade 4

A student at this level of mathematics succeeds at few of the most fundamental mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include

Number & Operation

- Partial recall of basic multiplication facts
- Computes inefficiently (e.g., uses repeated addition instead of multiplication)
- Uses models to represent fractions

Algebra

- Recognizes patterns in lists of numbers

Geometry & Measurement

- Names familiar polygons (e.g., pattern blocks)
- Classifies angles in a familiar orientation (e.g., one ray is horizontal)

Data Analysis

- Displays data from a table in a bar graph

Partially Meets the Standards

Grade 4

A student at this level of mathematics partially meets the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Number & Operation

- Knows basic multiplication facts and recognizes some division facts
- Knows decimal and fraction equivalents for halves and fourths
- Uses models to compute with fractions

Algebra

- Uses a verbal rule to continue pattern
- Matches number sentences with an isolated unknown in situations involving only multiplication

Geometry & Measurement

- Names and describes polygons based on a familiar pictorial orientation using solely one attribute
- Identifies lines of symmetry
- Recognizes congruent shapes with the same orientation
- Calculates perimeter when all sides of a graphic are labeled

Data Analysis

- Translates between tables and bar graphs

Meets the Standards

Grade 4

A student at this level of mathematics meets the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Number & Operation

- Knows division facts

Multiplies multi-digit numbers
Solves multiplication problems when all relevant information is present and the question is clearly defined
Solves division problems by solving for missing factor
Connects relationship between multiplication and division
Solves multi-step problems involving addition and subtraction
Uses fraction models to determine equivalent fractions
Reads and writes decimals up to thousandths

Algebra

Uses a verbal rule for input-output table
Recognizes an Algebraic rule for a one-operation pattern
Represents real-world situations with a number sentence involving an unknown

Geometry & Measurement

Names and describes triangles and common quadrilaterals using definitions
Classifies angles in a variety of orientations
Has a conceptual understanding of area as length times width
Identifies a transformation (reference MN Academic Standards 4.3.3)

Data Analysis

Collects, organizes, and displays data
Solves problems in data displays involving fractions

Exceeds the Standards

Grade 4

A student at this level of mathematics exceeds the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated very consistently may include:

Number & Operation

Chooses correct operation in a problem solving situation
Uses various strategies to solve multi-step problems and assess the reasonableness of results
Develops a rule for addition and subtraction of fractions with common denominators
Compares and orders decimals to the thousandths

Algebra

Uses multi-step rules for patterns presented in different formats
Translates between real-world situations and number sentences

Geometry & Measurement

Names and classifies polygons in a variety of contexts and orientations
Has a conceptual understanding that polygons can be described using sides AND/OR angles
Calculates area by decomposing shapes into rectangles
Applies transformations to shapes
Has a conceptual understanding of congruency (reference MN Academic Standards 4.3.3.4)

Data Analysis

Conceptual understanding of solving problems involving data displays, including timelines and Venn diagrams

Grade 5 Mathematics MCA-III Achievement Level Descriptors

Does Not Meet the Standards

Grade 5

A student at this level of mathematics succeeds at few of the most fundamental mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include

Number & Operation

- Partial mastery of basic division facts
- Recognizes fractions and decimals in familiar context

Algebra

- Recognizes patterns that use skip counting
- Works with simple variable representations

Geometry & Measurement

- Distinguishes between two- and three-dimensional shapes
- Uses informal naming conventions

Data Analysis

- Performs procedures for finding mean, median and range according to direct instructions
- Reads displays of data

Partially Meets the Standards

Grade 5

A student at this level of mathematics partially meets the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Number & Operation

- Knows basic division facts
- Knows benchmark decimal and fraction equivalents (e.g., $\frac{1}{2} = 0.5$, $\frac{1}{4} = 0.25$)

Algebra

- Recognizes patterns in a list of numbers
- Resorts to calculation to verify commutative and associative properties
- Solves verbal and simple one-step equations and inequalities by substituting a value for the unknown

Geometry & Measurement

- Recognizes similar attributes of three-dimensional figures
- Has limited vocabulary for attributes of three-dimensional figures
- Recognizes area as a multiplicative model (e.g., multiplies two sides of any shape to find area)

Data Analysis

- Applies rote procedures for calculating mean, median and range (e.g., median is always middle number in a list)
- Interprets simple displays of data to solve problems

A student at this level of mathematics meets the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Number & Operation

- Divides multi-digit numbers
- Solves division problems when all relevant information is present and the question is clearly defined
- Orders and compares common fractions and decimals
- Adds and subtracts fractions
- Adds and subtracts decimals

Algebra

- Uses rules to generate patterns
- Translates between patterns and rules
- Applies commutative and associative properties
- Understands simple inequalities
- Represents a situation with an equation containing a variable

Geometry & Measurement

- Classifies three-dimensional figures and describes distinct attributes using correct vocabulary
- Uses formulas to calculate area, surface area, and volume
- Decomposes familiar shapes

Data Analysis

- Calculates mean, median and range, and data can be provided in a variety of formats (e.g., tables, bar graphs)
- Works fluently with data displays and solving problems

A student at this level of mathematics exceeds the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated very consistently may include:

Number & Operation

- Efficiently divides and knows when to divide in a problem solving situation
- Adds and subtracts fluently with fractions and decimals

Algebra

- Works fluently with patterns and/or rules involving more than one operation or complex problem
- Applies the commutative, associate and distributive properties
- Interprets inequalities using variables

Geometry & Measurement

- Understands the connections between two- and three-dimensional representations
- Has a conceptual understanding of area, surface area, and volume

Data Analysis

- Conceptual understanding of mean, median and range
- Analyzes complex situations that include data displays and making interpretations

Grade 6 Mathematics MCA-III Achievement Level Descriptors

Does Not Meet the Standards

Grade 6

A student at this level of mathematics succeeds at few of the most fundamental mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include

Number & Operation

- Can only name common pairs of factors of a given number (e.g., $12 = 3 \times 4$)
- Uses decimals to separate numbers (e.g., $\frac{3}{4} = 3.4$)
- Sees decimal in money context only
- Solves ratio or rate problems as multiplication and division problems

Algebra

- Understands concept of variable as a place holder for an answer
- Recognizes patterns (additive) within lists of numbers
- Solves occasionally one-step problems in very familiar situations (money)
- Can find missing whole number based on number facts, not Algebraic properties

Geometry & Measurement

- When determining area and perimeter of irregular shapes, counts by whole numbers (part is whole, diagonal is always one unit)
- Associates 180 degrees with a triangle and 90 degrees with a right angle
- Finds one missing angle if given the other two in a triangle
- Will multiply or divide when given a problem requiring unit conversion

Data Analysis

- Determines probability as a fraction when sample space is given

Partially Meets the Standards

Grade 6

A student at this level of mathematics partially meets the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Number & Operation

- Names pairs of factors of numbers (e.g., $12 = 2 \times 6$, $12 = 3 \times 4$)
- Recognizes equivalences among common fractions, decimals, and percents
- Recognizes a ratio (only) in numeric form
- Solves unit rate problems in a straight-forward context (division)

Algebra

- Solves one-step problems in straightforward situations
- Uses computational facts, instead of equality, to find solutions
- Recognizes patterns (e.g., multiplicative and additive patterns)
- Recognizes relationships between varying quantities represented in tables, graphs, or verbal descriptions

Geometry & Measurement

- Calculates area and volume for basic figures (rectangles) when dimensions are provided
- Determines area and perimeter of irregular shapes by counting
- Calculates surface area when a net is provided
- Converts between feet and inches, hours and minutes

Data Analysis

- Determines sample space (i.e., the set of all possible outcomes) in a simple and very familiar context
- Understands simple probability expressed in fractional form

Meets the Standards

Grade 6

A student at this level of mathematics meets the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Number & Operation

- Understands the concept of factors and factoring (composing and decomposing numbers)
- Determines equivalences among fractions, decimals, and percents but reverts to one representation to solve problems (e.g., changes everything to decimals)
- Creates ratio to represent situation when given key words in context
- Understands concept of ratio

Algebra

- Represents relationships between varying quantities using equations and inequalities, involving variables, graphs, and verbal descriptions
- Uses the properties of arithmetic as well as order of operations to generate equivalent expressions and to solve problems

Geometry & Measurement

- Recognizes and applies formulas for two- and three-dimensional figures
- Determines area and perimeter of irregular shapes when key is one-square unit
- Recognizes vocabulary associated with angles
- Knows basic conversions among units within a measurement system (e.g., feet to inches, centimeters to meters)

Data Analysis

- Determines sample space
- Understands simple probability in fractions, decimals, and percents

Exceeds the Standards

Grade 6

A student at this level of mathematics exceeds the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated very consistently may include:

Number & Operation

- Recognizes when it is appropriate to apply the concept of factoring
- Sees connection between factoring and application in a problem solving situation
- Translates efficiently between fraction, decimal, and percent forms of positive rational number to solve problems

Compares ratios and understands their relationship to fractions
Recognizes ratios in context

Algebra

Interprets equations and inequalities with multiple unknowns
Understands that solving for a variable is not always the answer to the question

Geometry & Measurement

Determines area and perimeter of irregular shapes
Determines surface area
Understands and uses relationships between angles in geometric figures
Converts among units of measure within a measurement system

Data Analysis

Represents probabilities in real-world problems, including determining sample space in a variety of ways
Understands concept of probability
Solves problems involving compound probability

Grade 7 Mathematics MCA-III Achievement Level Descriptors

Does Not Meet the Standards

Grade 7

A student at this level of mathematics succeeds at few of the most fundamental mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include

Number & Operation

- Changes numbers in fractional form to decimal form by dividing
- Recognizes that short terminating decimals, fractions, and whole numbers are rational
- Recognizes familiar numbers as rational
- Recognizes that a negative numbers is less than a positive number
- Solves one-step problems with integers
- Uses a set of defined steps to find a missing number in a given proportion

Algebra

- Represents simple context as a graph
- Relies on key words to determine operations to represent relationships
- Solves one-step equations in explicit situations following rote procedure, instead of the concept of equality

Geometry & Measurement

- Calculates the circumference of a circle when given the diameter
- Recognizes a translation or a reflection on a coordinate grid

Data Analysis

- Calculates mean, median and range from a string of numbers using rote procedures (numbers must be in increasing order to calculate median)
- Matches a given data set to the graph of the data
- Determines sample space (i.e., the set of all possible outcomes) in a simple and very familiar context
- Understands simple probability expressed in fractional form

Partially Meets the Standards

Grade 7

A student at this level of mathematics partially meets the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Number & Operation

- Changes numbers in fractional form to decimal form and uses to compare
- Recognizes common repeating decimals and perfect squares under 100 as rational
- Solves multi-step problems involving familiar rational numbers when all relevant information is present and the question is clearly defined

Algebra

- Matches a proportion to a given problem situation
- Writes algebraic expressions using the commutative and associative properties
- Solves equations numerically (by substitution)

Geometry & Measurement

- Uses formulas for area and circumference of a circle and volume of a cylinder when exact values to substitute are given
- Solves problems with similar figures when a diagram is provided with corresponding parts labeled with “friendly” numbers
- Uses verbal description to perform a single translation or reflection on a grid

Data Analysis

- Calculates mean, median and range from a string of numbers (knows to order data set to determine median – or does not have to write down the ordered data set)
- Reads circle graphs to solve problems
- Determines the sample space for an experiment using inefficient procedures
- Understands simple probability in fractions, decimals, and percents

Meets the Standards

Grade 7

A student at this level of mathematics meets the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Number & Operation

- Recognizes rational numbers in various forms and converts between forms
- Compares positive and negative rational numbers
- Solves multi-step problems involving rational numbers in routine problems/situations including proportions
- Understands that absolute value is the distance from zero

Algebra

- Understands the concept of proportionality and applies to routine problem solving situations
- Uses properties of algebra as well as order of operations to generate equivalent algebraic expressions and solve problems
- Represents and solves equations involving one variable, symbolically

Geometry & Measurement

- Uses formulas to calculate area and circumference of circles and volume and surface area of cylinders
- Uses proportions and ratios to solve problems involving scale drawings and conversions
- Uses verbal descriptions to perform translations or reflections on a grid

Data Analysis

- Calculates mean, median and range from various data displays
- Understands impact of change in data set (increase or decrease)
- Reads circle graphs and histograms to solve problems
- Calculates probability as a fraction of sample space

A student at this level of mathematics exceeds the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated very consistently may include:

Number & Operation

- Conceptual understanding of rational numbers including justification of why a number is rational
- Solves non-routine (complex) problems/situations using rational numbers

Algebra

- Distinguishes proportional relationships from other relationships
- Understands the concept of proportionality and applies it to non-routine problem solving situations
- Uses the properties as well as order of operations to generate equivalent algebraic expressions and solve non-routine problems
- Represents and solves equations involving non-routine representations

Geometry & Measurement

- Justifies formulas for surface area and volume
- Can see relationships between circles and cylinders
- Solves problems involving scale factor and area ratios (with or without a diagram)
- Uses algebraic rules to describe multiple translations or reflections on a grid

Data Analysis

- Efficiently determines mean, median and range regardless of presentation
- Understands abstractly how change in data set impacts mean and median (quantity of change without recalculating)
- Interprets circle graphs and histograms to solve problems
- Uses proportions to calculate probabilities and solve non-routine problems

Grade 8 Mathematics MCA-III Achievement Level Descriptors

Does Not Meet the Standards

Grade 8

A student at this level of mathematics succeeds at few of the most fundamental mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include

Number & Operation

Recognizes fractions and terminating decimals as rational numbers

Algebra

Recognizes linear functions in graphic presentations

Translates linear representations from a table to a graph

Identifies slope by counting whole number units on a graph

Identifies patterns in a table of a linear function (e.g., recognizes patterns for x or y-values but not the relationship between x and y)

Substitutes “easy” numbers and evaluates simple expressions

Geometry & Measurement

Recognizes the equation for the Pythagorean Theorem

Recognizes parallel or perpendicular lines on a graph

Data Analysis

Generalizes the properties of the line of best fit of a graphed data set

Displays data using scatterplots

Partially Meets the Standards

Grade 8

A student at this level of mathematics partially meets the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Number & Operation

Recognizes familiar rational and irrational numbers

Algebra

Recognizes familiar linear functions in symbolic (using key variables) and graphic presentations

Translates linear representations from an equation in slope-intercept form to a graph

Identifies y-intercept and slope from graphical representation or an equation written in slope-intercept form

Evaluates routine algebraic expressions

Solves equations with variables using substitution

Geometry & Measurement

Substitutes numbers in the Pythagorean Theorem to determine hypotenuse

Makes partial connection of slope with parallel lines

Data Analysis

Given a data set, student identifies the line of best fit and makes statements about the general trend of the data

A student at this level of mathematics meets the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Number & Operation

- Recognizes real numbers in various forms
- Compares real numbers
- Generates equivalent expressions involving rational numbers in routine problems/situations, including scientific notation

Algebra

- Recognizes a linear function in symbolic and graphic presentations
- Represents familiar and routine linear situations with tables, verbal descriptions, symbols, equations, and graphs and translates from one representation to another
- Identifies graphical properties of linear functions
- Generates and evaluates equivalent algebraic expressions
- Identifies systems of linear equations when provided a verbal description
- Identifies the solution of a linear system as the intersection of the two lines when given the graph
- Solves equations and inequalities using algebraic properties

Geometry & Measurement

- Applies the Pythagorean Theorem to solve problems
- Identifies parallel lines graphically and symbolically
- Makes partial connection of slope with perpendicular lines

Data Analysis

- Given a data set, student identifies the line of best fit and interprets the data
- Makes predictions about the data set

A student at this level of mathematics exceeds the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated very consistently may include:

Number & Operation

- Conceptual understanding of real numbers

Algebra

- Conceptual understanding of dependent and independent variables
- Solves equations and inequalities and interprets solutions
- Represents non-routine linear situations with tables, verbal descriptions, symbols, equations, and graphs
- Converts between forms of a linear equation (i.e., standard, point-slope, slope-intercept)
- Knows names of algebraic properties for justification in evaluating algebraic expressions
- Represents systems of linear equations provided a verbal description
- Solves a linear system algebraically and graphically and expresses the solution as an ordered pair

Geometry & Measurement

Conceptual understanding of the Pythagorean Theorem and applies it in non-routine problems
Understands and applies slopes of parallel and perpendicular lines graphically and symbolically

Data Analysis

Given a data set, determines the line of best fit and interprets the data
Assesses reasonableness of predictions in non-routine situations

Achievement Level Descriptors

Minnesota Comprehensive Assessments – Series III (MCA)

Mathematics, Grade 11

Standards revision	2007
First operational test administration	Spring 2014
Achievement Level Descriptors approved	July 2014

Grade 11 Mathematics MCA-III Achievement Level Descriptors

Does Not Meet the Standards

Grade 11

Students at this level succeed at few of the most fundamental mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Algebra

- Uses the vertical line test to identify a function
- Recognizes linear and exponential functions using tables, symbols and graphs
- Factors common monomial factors from polynomials
- Factors quadratic expressions with leading coefficient of 1

Geometry & Measurement

- Substitutes numbers into measurement formulas and performs calculations
- Identifies the sine, cosine, or tangent ratio
- Identifies properties of geometric figures and recognizes congruent and similar figures

Data Analysis & Probability

- Given a data set, computes measures of center and location
- Applies the multiplication principle to determine the size of a sample space
- Calculates experimental probabilities by using relative frequencies of outcomes

Partially Meets the Standards

Grade 11

Students at this level of mathematics partially meet the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Algebra

- Identifies key features (e.g., intercepts, slopes) of linear functions using symbolic and graphical methods
- Evaluates polynomial and rational expressions
- Adds, subtracts, and multiplies polynomials
- Uses factoring to solve quadratic equations with leading coefficient of 1
- Recognizes, represents and solves problems involving linear and exponential functions using tables, verbal descriptions, symbols and graphs
- Solves systems of linear inequalities when represented graphically

Geometry & Measurement

- Uses formulas to calculate measurements of geometric figures
- Uses sine, cosine, or tangent to find the missing leg in a right triangle
- Classifies polygons
- Identifies the missing statements or reasons in a proof regarding geometric relationships
- Solves problems using the Pythagorean Theorem or its converse
- Solves problems involving congruent or similar figures

Data Analysis & Probability

- Uses various measures of spread to compare data sets
- Determines sample size to compute probabilities
- Identifies intersections and unions in Venn diagrams

Students at this level of mathematics meet the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Algebra

- Identifies key features (e.g., intercepts, translations) of functions and other relations using symbolic and graphical methods
- Generates equivalent algebraic expressions involving polynomials and radicals
- Uses algebraic properties to evaluate expressions
- Represents and solves real-world and mathematical situations involving linear, quadratic, exponential and n th root functions using equations, inequalities, tables or graphs

Geometry & Measurement

- Uses context to obtain information needed to apply measurement formulas for geometric figures, including scale factors
- Solves typical geometric problems using algebraic methods and trigonometric ratios sine, cosine and tangent
- Provides a logical chain of reasoning, with justifications, to construct an argument
- Applies properties of geometric figures to solve problems and to logically justify results in geometry

Data Analysis & Probability

- Analyzes data using various measures (e.g., regression line, correlation coefficient) to describe relationships, identify trends, make inferences, and draw conclusions
- Applies probability concepts, including intersections, unions and complements of events, conditional probability and independence
- Reads and interprets contingency tables

Students at this level of mathematics exceed the mathematics skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Algebra

- Identifies key features of rational functions and other relations using symbolic and graphical methods
- Represents and solves non-routine problems in real-world and mathematical situations using equations, inequalities, tables, or graphs

Geometry & Measurement

- Solves non-routine geometric problems using algebraic methods and trigonometric ratios sine, cosine and tangent
- Explains or repairs the flaws in an argument
- Applies properties of geometric figures to solve non-routine problems and to logically justify results in geometry

Data Analysis & Probability

- Analyzes data using various measures to describe relationships, identify trends, make inferences, and justify conclusions
- Creates contingency tables

Achievement Level Descriptors

Minnesota Comprehensive Assessments – Series III (MCA)

Reading, Grades 3–8 and 10

Standards revision	2010
First operational test administration	Spring 2013
Achievement Level Descriptors approved	July 2013

Grade 3 Reading MCA-III Achievement Level Descriptors

Does Not Meet the Standards

Grade 3

When interacting with literature and informational text, students at this achievement level demonstrate the following skills inconsistently and with minimal accuracy.

Key Ideas and Details (Standards 1, 2, 3)

- Recall details from text
- Make simple predictions based on explicit text
- Identify obvious fact and opinion in explicit text
- Make general comparisons based on explicit text
- Locate explicit main idea and central message
- Identify basic sequence of events

Craft and Structure (Standards 4, 5, 6)

- Recognize simple figures of speech
- Locate obvious context clues to understand word meanings
- Identify keywords and phrases
- Recognize the features, format, and function of basic text structures (e.g., listing) and their impact on meaning
- State author's obvious purpose in explicit text

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

- Identify obvious evidence in text (e.g., logical connections between sentences and paragraphs)

Partially Meets the Standards

Grade 3

When interacting with literature and informational text, students at this achievement level demonstrate the following skills with limited consistency and accuracy.

Key Ideas and Details (Standards 1, 2, 3)

- Use explicit text evidence to make logical conclusions
- Identify key details related to text
- Make predictions based on text
- Sequence basic plot events, real events, and steps in a process
- Locate cause and effect
- Identify fact and opinion
- Use evidence from text to make meaning
- Make simple comparisons based on implicit text
- State main idea and topic from a section of explicit text or from explicit text as a whole
- Identify obvious literary elements (e.g., plot, characterization, setting, theme)
- Identify literary terms (e.g., tale, moral)

Craft and Structure (Standards 4, 5, 6)

- Identify basic literary devices (e.g., obvious puns, simple rhyme schemes)
- Identify basic connotations
- Use context clues to understand word meanings
- Define technical terminology in content area texts

Recognize standard transitional words (e.g., but, yet, still)
Use word structures to construct meaning (affixes and roots)
Identify features, format, and function of basic text structures (e.g., general description) and their impact on meaning
State author's basic purpose within text

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Make judgments about author's credibility based on explicit text:

- locate obvious argumentation within text
- identify credible evidence (e.g., logical explanation)
- recognize how the author presents fact/opinion

Meets the Standards

Grade 3

When interacting with literature and informational text, students at this achievement level demonstrate the following skills consistently and accurately.

Key Ideas and Details (Standards 1, 2, 3)

Use implicit text evidence to quote accurately and make logical conclusions

Identify relevant details that support conclusions from text

Make generalizations and predictions

Sequence plot events, real events, and steps in a process

Use text evidence to understand cause/effect relationships

Make inferences based on implicit text

Distinguish fact from opinion in explicit text

Use evidence from text to justify interpretations of meaning

Compare and contrast based on implicit text

Summarize from a section of text or text as a whole

- main idea
- central message
- supporting details
- plot
- subject
- theme
- topic
- similarities and differences among ideas and events

Distinguish among literary elements (e.g., plot, characterization, setting, theme)

Differentiate methods of characterization (e.g., dialogue, appearance, behavior)

Define meaning of literary terms (e.g., tale, moral)

Compare and contrast presentation of literary elements

Craft and Structure (Standards 4, 5, 6)

Identify literary devices (e.g., puns, end rhyme)

Identify figures of speech

Connect connotations to meaning

Use reasoning and evidence to understand word meanings

Categorize technical terminology in content area texts

Identify transitional words and phrases (e.g., for example, first, second, third)
Use etymology (word history) and morphology (word structure) to construct meaning of a word or phrase
Analyze the features, format, and function of complex text structures (e.g., chronology) and their impact on meaning
Recognize how parts of text relate to the whole
Identify author's use of perspective (personal point of view) and tone (attitude toward what she or he has written)
Interpret authors' purposes within and across text(s)
Identify mood (emotional atmosphere of text)
Identify style (author's techniques and approach to meaning—e.g., word choice, sentence structure, use of literary devices, voice)

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Analyze author's credibility based on sources used
Identify methods of argumentation (e.g., analogy, details and examples)
Recognize validity of reasoning
Recognize relevance and sufficiency of evidence
Recognize obvious fallacies of logic (e.g., stereotyping)
Recognize how credible information is presented in text (e.g., interviews with experts, current research)
Recognize author's obvious bias

Exceeds the Standards

Grade 3

When interacting with literature and informational text, students at this achievement level demonstrate the following skills with a high degree of consistency and efficiency.

Key Ideas and Details (Standards 1, 2, 3)

Draw logical conclusions from text
Identify specific details to support conclusions from text
Use generalizations to make predictions
Use text evidence to analyze cause/effect relationships
Make complex inferences based on implicit text
Distinguish fact from opinion in a variety of implicit texts
Compare and contrast text features in depth based on implicit text
Summarize from a section of text, text as a whole, and across texts

- main idea
- central message
- supporting details
- plot
- subject
- theme
- topic
- similarities and differences among ideas and events

Analyze literary elements (e.g., plot, characterization, setting, theme)
Analyze methods of characterization

Craft and Structure (Standards 4, 5, 6)

Analyze literary devices (e.g., effectiveness of puns, intricacy of rhyme scheme)

Recognize how connotations impact meaning

Analyze purpose of technical terminology in content area texts

Analyze use of transitional devices (e.g., obviously, unquestionably, certainly)

Evaluate the features, format, and function of complex text structures (e.g., definition) and their impact on meaning

Analyze how parts of text relate to the whole

Analyze how author's message is shaped by perspective and tone

Recognize how author's choices impact style (e.g., impact on tone, imagery, etc.)

Analyze authors' purpose(s) within and across text(s)

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Make judgments about author's credibility based on complex text

- apply basic concepts of argumentation (background, discussion, and proof of claim)
- analyze validity of reasoning
- identify basic fallacies of logic (e.g., hasty generalization)
- analyze relevancy and sufficiency of evidence
- analyze author's bias

Grade 4 Reading MCA-III Achievement Level Descriptors

Does Not Meet the Standards

Grade 4

When interacting with literature and informational text, students at this achievement level demonstrate the following skills inconsistently and with minimal accuracy.

Key Ideas and Details (Standards 1, 2, 3)

- Recall details from text
- Make simple predictions based on explicit text
- Identify a cause or an effect
- Identify obvious fact and opinion in explicit text
- Make general comparisons based on explicit text
- Locate explicit main idea and central message
- Identify basic sequence of events

Craft and Structure (Standards 4, 5, 6)

- Recognize simple figures of speech
- Locate obvious context clues to understand word meanings
- Identify key words and phrases
- Recognize the features, format, and function of basic text structures (e.g., listing) and their impact on meaning
- State author's obvious purpose in explicit text

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

- Identify obvious evidence in text (e.g., logical connections between sentences and paragraphs)

Partially Meets the Standards

Grade 4

When interacting with literature and informational text, students at this achievement level demonstrate the following skills with limited consistency and accuracy.

Key Ideas and Details (Standards 1, 2, 3)

- Use explicit text evidence to make logical conclusions
- Identify key details related to text
- Make predictions based on text
- Sequence basic plot events, real events and steps in a process
- Locate cause or effect
- Identify fact and opinion
- Use evidence from text to make meaning
- Make simple comparisons based on implicit text
- State main idea and topic from a section of explicit text or from explicit text as a whole
- Identify obvious literary elements (e.g., plot, conflict, characterization, setting, theme)
- Identify literary terms (e.g., hero, villain)

Craft and Structure (Standards 4, 5, 6)

- Identify obvious literary devices (e.g., simile)
- Identify basic connotations
- Use context clues to understand word meanings

Define technical terminology in content area texts
Recognize standard transitional words (e.g., besides, finally, however)
Use word structures to construct meaning (affixes and roots)
Identify features, format, and function of basic text structures (e.g., general description) and their impact on meaning
State author's basic purpose within text

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Make judgments about author's credibility based on explicit text

- locate obvious argumentation within text
- identify credible evidence (e.g., logical explanation)
- recognize how the author presents fact/opinion

Meets the Standards

Grade 4

When interacting with literature and informational text, students at this achievement level demonstrate the following skills consistently and accurately.

Key Ideas and Details (Standards 1, 2, 3)

Use implicit text evidence to quote accurately and make logical conclusions

Identify relevant details that support conclusions from text

Use generalizations and make predictions

Sequence plot events, real events, and steps in a process

Use text evidence to understand cause/effect relationships

Make inferences based on implicit text

Distinguish fact from opinion in explicit text

Use evidence from text to justify interpretations of meaning

Compare and contrast based on implicit text

Summarize from a section of text or text as a whole:

- main idea
- central message
- supporting details
- plot
- subject
- theme
- topic
- similarities and differences among ideas and events

Distinguish among literary elements (e.g., plot, characterization, setting, theme)

Differentiate methods of characterization (e.g., dialogue, appearance, behavior)

Define basic meaning of literary terms (e.g., hero, villain)

Compare and contrast presentation of literary elements

Craft and Structure (Standards 4, 5, 6)

Define the meaning of literary devices (e.g., end rhyme)

Identify figures of speech

Connect connotations to meaning

Use reasoning and evidence to understand word meanings

Categorize technical terminology in content area texts
Identify transitional words and phrases (e.g., meanwhile, after all, on the other hand)
Use etymology (word history) and morphology (word structure) to construct meaning of a word or phrase
Analyze the features, format, and function of complex text structures (e.g., chronology) and their impact on meaning
Identify author's use of perspective (personal point of view) and tone (attitude toward what she or he has written)
Interpret authors' purposes within and across text(s)
Identify mood (emotional atmosphere of text)
Identify style (author's techniques and approach to meaning—e.g., word choice, sentence structure, use of literary devices, voice)

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Analyze author's credibility based on sources used
Identify methods of argumentation (e.g., analogy, details and examples)
Recognize relevance and sufficiency of evidence
Recognize validity of reasoning
Recognize obvious fallacies of logic (e.g. stereotyping)
Recognize how credible information is presented in text (e.g., interviews with experts, current research)
Recognize author's obvious bias

Exceeds the Standards

Grade 4

When interacting with literature and informational text, students at this achievement level demonstrate the following skills with a high degree of consistency and efficiency.

Key Ideas and Details (Standards 1, 2, 3)

Draw logical conclusions from abstract text
Identify specific details to support conclusions from text
Use generalizations and make complex predictions
Use text evidence to analyze and synthesize cause/effect relationships
Make complex inferences based on implicit text
Distinguish fact from opinion in a variety of implicit texts
Compare and contrast text features in depth based on implicit text
Summarize from a section of text, text as a whole, and across texts:

- main idea
- central message
- supporting details
- plot
- subject
- theme
- topic
- similarities and differences among ideas and events

Analyze literary elements (e.g., plot, characterization, setting, theme)
Analyze methods of characterization

Craft and Structure (Standards 4, 5, 6)

Analyze literary devices (e.g., foreshadowing)

Analyze the use of figures of speech

Recognize how connotations impact meaning

Analyze purpose of technical terminology in content area texts

Analyze use of transitional devices (e.g., evidently, undeniably, clearly)

Evaluate the features, format, and function of complex text structures (e.g., definition) and their impact on meaning

Analyze how author's message is shaped by perspective and tone

Analyze authors' purpose(s) within and across text(s)

Recognize how author's choices impact style (e.g., impact on tone, imagery, etc.)

Identify interaction between mood and style

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Make judgments about author's credibility based on complex text:

- apply basic concepts of argumentation (background, discussion, and proof of claim)
- analyze validity of reasoning
- identify basic fallacies of logic (e.g., hasty generalization)
- analyze relevancy and sufficiency of evidence
- analyze author's bias

Grade 5 Reading MCA-III Achievement Level Descriptors

Does Not Meet the Standards

Grade 5

When interacting with literature and informational text, students at this achievement level demonstrate the following skills inconsistently and with minimal accuracy.

Key Ideas and Details (Standards 1, 2, 3)

- Recall details from text
- Make simple predictions based on explicit text
- Identify a cause or an effect
- Identify obvious fact and opinion in explicit text
- Make general comparisons based on explicit text
- Locate explicit main idea, central message, and theme
- Identify basic sequence of events

Craft and Structure (Standards 4, 5, 6)

- Recognize simple figures of speech
- Locate obvious context clues to understand word meanings
- Identify key words and phrases
- Recognize the features, format, and function of basic text structures (e.g., listing) and their impact on meaning
- State author's obvious purpose in explicit text

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

- Identify obvious evidence in text (e.g., logical connections between sentences and paragraphs)

Partially Meets the Standards

Grade 5

When interacting with literature and informational text, students at this achievement level demonstrate the following skills with limited consistency and accuracy.

Key Ideas and Details (Standards 1, 2, 3)

- Use explicit text evidence to make logical conclusions
- Identify key details related to text
- Make predictions based on text
- Sequence basic plot events, real events, and steps in a process
- Locate cause or effect
- Identify fact and opinion
- Use evidence from text to make meaning
- Make simple comparisons among text features based on implicit text
- State main idea and topic from a section of explicit text or from explicit text as a whole
- Identify literary elements (e.g., plot, characterization, setting, theme)
- Identify obvious characterization
- Identify literary terms (e.g., protagonist, antagonist)

Craft and Structure (Standards 4, 5, 6)

- Identify literary devices (e.g., hyperbole)
- Identify basic connotations

Use context clues to understand word meanings
Define technical terminology in content area texts
Recognize standard transitional words (e.g., similarly, furthermore, besides)
Use word structures to construct meaning (affixes and roots)
Identify features, format, and function of basic text structures (e.g., general description) and their impact on meaning
State author's basic purpose within text

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Make judgments about author's credibility based on explicit text:

- locate obvious argumentation within text
- identify credible evidence (e.g., logical explanation)
- recognize how the author presents fact/opinion

Meets the Standards

Grade 5

When interacting with literature and informational text, students at this achievement level demonstrate the following skills consistently and accurately.

Key Ideas and Details (Standards 1, 2, 3)

Use implicit text evidence to quote accurately and make logical conclusions

Identify relevant details that support conclusions from text

Use generalizations and make predictions

Sequence plot events, real events, and/or steps in a process

Use text evidence to understand cause/effect relationships

Make inferences based on implicit text

Distinguish fact from opinion in explicit text

Use evidence from text to justify interpretations of meaning

Compare and contrast text features based on implicit text

Summarize from a section of text or text as a whole:

- important text evidence (explicit or implicit)
- main idea
- central message
- supporting details
- plot
- subject
- theme
- topic
- similarities and differences among ideas and events

Distinguish among literary elements (e.g., plot, characterization, setting, theme)

Differentiate methods of characterization (e.g., dialogue, appearance, behavior)

Define meaning of literary terms (e.g., protagonist, antagonist)

Compare and contrast presentation of literary elements

Craft and Structure (Standards 4, 5, 6)

Define the meaning of literary devices (e.g., hyperbole)

Identify figures of speech

Connect connotations to meaning
Use reasoning and evidence to understand word meanings
Categorize technical terminology in content area texts
Identify transitional words and phrases (e.g., concurrently, at the same time, in the meantime)
Use etymology (word history) and morphology (word structure) to construct meaning of a word or phrase
Analyze the features, format, and function of complex text structures (e.g., chronology) and their impact on meaning
Identify author's use of perspective (personal point of view) and tone (attitude toward what she or he has written)
Interpret authors' purposes within and across text(s)
Identify mood (emotional atmosphere of text)
Identify style (author's techniques and approach to meaning—e.g., word choice, sentence structure, use of literary devices, voice)

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Analyze author's credibility based on sources used
Identify methods of argumentation (e.g., analogy, details and examples)
Recognize relevancy and sufficiency of evidence
Recognize validity of reasoning
Recognize obvious fallacies of logic (e.g., stereotyping)
Recognize how credible information is presented in text (e.g., interviews with experts, current research)
Recognize author's obvious bias

Exceeds the Standards

Grade 5

When interacting with literature and informational text, students at this achievement level demonstrate the following skills with a high degree of consistency and efficiency.

Key Ideas and Details (Standards 1, 2, 3)

Draw logical conclusions from abstract text
Analyze relevant details to support conclusions from text
Generalize and make sophisticated predictions
Use text evidence to analyze and synthesize cause/effect relationships
Make complex inferences based on implicit text
Distinguish fact from opinion in a variety of implicit texts
Compare and contrast individuals and ideas based on implicit text
Summarize and/or paraphrase from a section of text, text as a whole, and across texts:

- important text evidence (explicit or implicit)
- main idea
- central message
- supporting details
- plot
- subject
- theme

- topic
- similarities and differences among ideas and events

Analyze literary elements (e.g., plot, conflict, characterization, setting, theme)

Analyze methods of characterization

Craft and Structure (Standards 4, 5, 6)

Analyze literary devices (e.g., effectiveness of hyperbole)

Analyze the use of figures of speech

Recognize how connotations impact meaning

Analyze purpose of technical terminology in content area texts

Analyze use of transitional devices (e.g., without a doubt, for the same reason, without reservation)

Evaluate the features, format, and function of complex text structures (e.g., definition) and their impact on meaning

Analyze how author's message is shaped by perspective and tone

Analyze authors' purpose(s) within and across text(s)

Recognize how author's choices impact style (e.g., impact on tone, imagery, etc.)

Identify interaction between mood and style

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Make judgments about author's credibility based on complex text:

- apply basic concepts of argumentation (background, discussion, and proof of claim)
- analyze validity of reasoning
- identify basic fallacies of logic (e.g., hasty generalization)
- analyze relevancy and sufficiency of evidence
- analyze author's bias

Grade 6 Reading MCA-III Achievement Level Descriptors

Does Not Meet the Standards

Grade 6

When interacting with literature and informational text, students at this achievement level demonstrate the following skills inconsistently and with minimal accuracy.

Key Ideas and Details (Standards 1, 2, 3)

- Recall key details from text
- Make predictions based on explicit text
- Identify cause and effect
- Identify fact and opinion in explicit text
- Make comparisons among text features based on explicit text
- Identify general plotlines
- Locate explicit main idea, central message, and theme
- Identify setting in explicit text
- Predict character's actions based on explicit text

Craft and Structure (Standards 4, 5, 6)

- Recognize simple figures of speech
- Use basic context clues to understand word meanings
- Locate key words and phrases
- Recognize the features, format, and function of basic text structures (e.g., chronology) and their impact on meaning
- State authors' basic purposes within and across text(s)
- Define basic technical terminology in content area texts

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

- Identify obvious evidence in explicit text (e.g., logical connections between sentences and paragraphs)
- Recognize how the author presents fact/opinion

Partially Meets the Standards

Grade 6

When interacting with literature and informational text, students at this achievement level demonstrate the following skills with limited consistency and accuracy.

Key Ideas and Details (Standards 1, 2, 3)

- Use explicit text evidence to:
 - quote accurately and make logical conclusions
 - make generalizations and predictions
 - identify simple cause/effect relationships
 - identify fact and opinion
- Sequence basic plot events, real events, and steps in a process in chronological order
- Describe how explicit supporting details are connected to conclusions from text and identify those details
- Compare and contrast individuals and ideas based on explicit text

Summarize from a section of text or text as a whole:

- explicit text evidence
- main idea
- central message
- plot
- theme
- topic
- similarities and differences among ideas and events

Distinguish among literary elements (e.g., plot, characterization, setting, theme)

Identify literary terms (e.g., exposition, resolution, denouement)

Craft and Structure (Standards 4, 5, 6)

Identify literary devices (e.g., stock character, dialect)

Identify basic connotations

Use context clues to understand word meanings

Define technical terminology and distinguish from nontechnical terminology across content area texts

Recognize standard transitional words (e.g., finally, previously, next)

Use word structures and multiple-meaning words to construct meaning (affixes and roots)

Identify figures of speech and their connotations

Identify features, format, and function of basic text structures (e.g., definition) and their impact on meaning

Identify author's use of perspective (personal point of view) and tone (attitude toward what she or he has written)

State authors' purpose within and across text(s)

Identify mood (emotional atmosphere of text)

Identify style (author's techniques and approach to meaning—e.g., word choice, sentence structure, use of literary devices, voice)

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Make judgments about author's credibility based on explicit text:

- locate and understand argumentation within text
- identify credible evidence
- recognize how credible information is presented in text (e.g., interviews with experts, current research)
- identify methods of argumentation (e.g., analogy, details and examples)
- recognize author's bias

Meets the Standards

Grade 6

When interacting with literature and informational text, students at this achievement level demonstrate the following skills consistently and accurately.

Key Ideas and Details (Standards 1, 2, 3)

Use implicit text evidence to:

- quote accurately and make logical conclusions
- analyze symbolism
- make generalizations and predictions

- recall cause/effect relationships
- make inferences

Sequence plot events, real events, and/or steps in a process in chronological order

Identify relevant/key details that support conclusions from text

Compare and contrast individuals and ideas based on implicit text

Summarize and/or paraphrase from a section of text, text as a whole, and across texts

- important text evidence (explicit or implicit)
- main idea
- central message
- supporting details
- plot
- subject
- theme
- topic
- similarities and differences among ideas and events

Recognize subtle presentation of literary elements (e.g., plot, conflict, characterization, setting, theme)

Differentiate methods of characterization (e.g., dialogue, appearance, behavior)

Define meaning of literary terms (e.g., exposition, denouement)

Compare and contrast presentation of literary elements

Determine theme or central idea of text

Craft and Structure (Standards 4, 5, 6)

Define the meaning of literary devices (e.g., irony, understatement)

Connect connotations to meaning

Use reasoning and evidence to justify interpretations of word meanings

Recognize that word relationships, context, and structure lead to intended or precise word meanings

Categorize technical terminology across content area texts

Identify transitional words and phrases (e.g., in this case, in addition, for the same reason)

Use etymology (word history) and morphology (word structure) and multiple meanings of a word or phrase to construct meaning

Analyze the use of figures of speech

Analyze the features, format, and function of complex text structures (e.g., cause and effect) and their impact on meaning

Analyze how author's message is shaped by perspective and tone

Interpret authors' purposes within and across text(s)

Identify interaction between mood and style

Recognize how author's choices impact style (e.g., impact on tone, imagery, etc.)

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Analyze authors' credibility based on sources used:

- Analyze methods of argumentation (e.g., painting a picture, anecdotes)
- Recognize relevancy and sufficiency of evidence
- Recognize validity of reasoning
- Identify basic fallacies of logic (e.g., false principle, either/or, emotional appeal)

- Analyze how credible information is presented within and across text(s) (e.g., statistics, testimony)
- Analyze author's bias

Exceeds the Standards

Grade 6

When interacting with literature and informational text, students at this achievement level demonstrate the following skills with a high degree of consistency and efficiency.

Key Ideas and Details (Standards 1, 2, 3)

Interpret subtle implicit text evidence to:

- quote accurately and make logical conclusions
- analyze symbolism
- make generalizations and predictions
- understand cause/effect relationships
- make inferences

Analyze relevant details that support conclusions from the text

Distinguish fact from opinion in a variety of implicit texts

Use evidence from text to synthesize interpretations

Compare and contrast individuals and ideas in depth based on implicit text

Synthesize to arrive at meaning from a section of text, text as a whole, and across texts:

- important text evidence (explicit or implicit)
- main idea
- central message
- supporting details
- plot
- subject
- theme
- topic
- similarities and differences among ideas and events

Interpret and evaluate interrelationships among literary elements (e.g., plot, conflict, characterization, setting, theme)

Evaluate methods of characterization and their impact on other literary elements

Craft and Structure (Standards 4, 5, 6)

Evaluate use of literary devices (e.g., omniscient narration, flashback)

Describe how word relationships, context, and structure lead to intended or precise word meanings

Compare and contrast figures of speech and their application and efficacy

Distinguish nuanced connotations

Analyze how connotations impact meaning

Evaluate application of technical terminology across content area texts

analyze adequacy and purpose

Analyze use of transitional devices (e.g., in spite of, on the contrary, in contrast)

Evaluate the features, format, and function of complex text structures (e.g., comparison and contrast) and their impact on meaning

Evaluate authors' purpose(s) within and across text(s)
Analyze mood and style and their interaction and impact

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Evaluate author's credibility based on complex text(s):

- apply concepts of argumentation (background, discussion, and proof of claim)
- analyze validity of reasoning
- analyze fallacies of logic (e.g., begging the claim, ad hominem)
- analyze relevancy and sufficiency of evidence
- evaluate subtle bias

Grade 7 Reading MCA-III Achievement Level Descriptors

Does Not Meet the Standards

Grade 7

When interacting with literature and informational text, students at this achievement level demonstrate the following skills inconsistently and with minimal accuracy.

Key Ideas and Details (Standards 1, 2, 3)

- Recall key details from text
- Make predictions based on explicit text
- Identify cause and effect
- Identify fact and opinion in explicit text
- Make comparisons among text features based on explicit text
- Identify general plotlines
- Locate explicit main idea, central message, and theme
- Identify setting in explicit text
- Predict character's actions based on explicit text

Craft and Structure (Standards 4, 5, 6)

- Recognize simple figures of speech
- Use basic context clues to understand word meanings
- Locate key words and phrases
- Recognize the features, format, and function of basic text structures (e.g., chronology) and their impact on meaning
- State authors' basic purposes within and across text(s)
- Define basic technical terminology in content area texts

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

- Identify obvious evidence in explicit text (e.g., logical connections between sentences and paragraphs)
- Identify how the author presents fact/opinion

Partially Meets the Standards

Grade 7

When interacting with literature and informational text, students at this achievement level demonstrate the following skills with limited consistency and accuracy.

Key Ideas and Details (Standards 1, 2, 3)

- Use explicit text evidence to:
 - quote accurately and make logical conclusions
 - make generalizations and predictions
 - identify simple cause/effect relationships
 - identify fact and opinion
- Sequence plot events, real events, and steps in a process in chronological order
- Describe how key details are related to conclusions from the text and identify those details
- Compare and contrast individuals and ideas based on explicit text

Summarize and/or paraphrase from a section of text or text as a whole:

- explicit text evidence
- main idea
- central message
- plot
- theme
- topic
- similarities and differences among ideas and events

Distinguish among literary elements (e.g., plot, conflict, characterization, theme)

Identify literary terms (e.g., comedy, tragedy)

Craft and Structure (Standards 4, 5, 6)

Identify literary devices (e.g., alliteration, onomatopoeia)

Identify connotations

Use context clues to understand word meanings

Define technical terminology and distinguish from nontechnical terminology across content area texts

Recognize standard transitional words (e.g., since, for instance, conversely)

Use word structures and multiple-meaning words to construct meaning (affixes and roots)

Identify figures of speech and their connotations

Identify the features, format, and function of basic text structures (e.g., definition) and their impact on meaning

Identify author's use of perspective (personal point of view) and tone (attitude toward what she or he has written)

State authors' purpose within and across text(s)

Identify mood (emotional atmosphere of text)

Identify style (author's techniques and approach to meaning—e.g., word choice, sentence structure, use of literary devices, voice)

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Make judgments about author's credibility based on explicit text:

- locate and understand argumentation within text
- identify credible evidence
- recognize how credible information is presented in text (e.g., interviews with experts, current research)
- identify methods of argumentation (e.g., analogy, details and examples)
- recognize author's bias

Meets the Standards

Grade 7

When interacting with literature and informational text, students at this achievement level demonstrate the following skills consistently and accurately.

Key Ideas and Details (Standards 1, 2, 3)

Use implicit text evidence to:

- quote accurately and make logical conclusions
- analyze symbolism
- make generalizations and predictions

- recall cause/effect relationships
- make inferences

Sequence intricate plot events, real events, and/or steps in a process in chronological order

Use relevant/key details from the text to support conclusions

Distinguish fact from opinion in a variety of implicit texts

Use evidence from text to justify interpretations of meaning

Compare and contrast individuals and ideas based on implicit text

Summarize and/or paraphrase from a section of text or text as a whole:

- important text evidence (explicit or implicit)
- main idea
- central message
- supporting details
- plot
- subject
- theme
- topic
- similarities and differences among ideas and events

Analyze subtle use of, and connections among, literary elements (e.g., plot, conflict, characterization, setting, theme)

Differentiate methods of characterization (e.g., dialogue, appearance, behavior)

Define meaning of literary terms (e.g., comedy, tragedy)

Compare and contrast presentation of literary elements

Craft and Structure (Standards 4, 5, 6)

Define the meaning of literary devices (e.g., paradox, oxymoron)

Connect connotations to meaning

Use reasoning and evidence to justify interpretations of word meanings

Recognize that word relationships, context, and structure lead to intended or precise word meanings

Categorize technical terminology across content area texts

Identify transitional words and phrases (e.g., subsequently, surprisingly, as a result)

Use etymology (word history) and morphology (word structure) and multiple meanings of a word or phrase to construct meaning

Analyze the use of figures of speech

Identify connotative meanings of words and phrases

Analyze the features, format, and function of complex text structures (e.g., cause and effect) and their impact on meaning

Analyze how author's message is shaped by perspective and tone

Interpret authors' purposes within and across text(s)

Identify interaction between mood and style

Recognize how author's choices impact style (e.g., impact on tone, imagery, etc.)

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Analyze authors' credibility based on sources used

Analyze methods of argumentation (e.g., painting a picture, anecdotes)

Recognize relevancy and sufficiency of evidence

Recognize validity of reasoning

Identify basic fallacies of logic (e.g., false principle, either/or, emotional appeal)

Analyze how credible information is presented within and across text(s) (e.g., statistics, testimony)
Analyze author's bias

Exceeds the Standards

Grade 7

When interacting with literature and informational text, students at this achievement level demonstrate the following skills with a high degree of consistency and efficiency.

Key Ideas and Details (Standards 1, 2, 3)

Interpret subtle implicit text evidence to:

- quote accurately from the text and make logical conclusions
- analyze symbolism
- make generalizations and predictions
- understand complex cause/effect relationships
- make inferences

Analyze relevant details from text to support conclusions

Use evidence from text to synthesize interpretations

Compare and contrast individuals and ideas in depth based on implicit text

Synthesize to arrive at meaning from a section of text, text as a whole, and across texts

- important text evidence (explicit or implicit)
- main idea
- central message
- supporting details
- plot
- subject
- theme
- topic
- similarities and differences among ideas and events

Interpret and evaluate interrelationships among literary elements (e.g., plot, conflict, characterization, setting, theme)

Evaluate methods of characterization and their impact on other literary elements

Craft and Structure (Standards 4, 5, 6)

Evaluate use of literary devices (e.g., parallelism, juxtaposition)

Describe how word relationships, context, and structure lead to implied, intended or precise word meanings

Compare and contrast figures of speech and their application and efficacy

Distinguish nuanced connotations

Analyze how connotations impact meaning

Evaluate application of technical terminology across content area texts

Analyze adequacy and purpose

Analyze use of transitional devices (e.g., on this occasion, in this situation, with this in mind)

Evaluate the features, format, and function of complex text structures (e.g., comparison and contrast) and their impact on meaning

Evaluate authors' purpose(s) within and across text(s)

Analyze mood and style and their interaction and impact

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Evaluate author's credibility based on complex text(s):

- apply concepts of argumentation (background, discussion, and proof of claim)
- analyze validity of reasoning
- analyze fallacies of logic (e.g., begging the claim, ad hominem)
- analyze relevancy and sufficiency of evidence
- evaluate methods of argumentation
- evaluate subtle bias

Grade 8 Reading MCA-III Achievement Level Descriptors

Does Not Meet the Standards

Grade 8

When interacting with literature and informational text, students at this achievement level demonstrate the following skills inconsistently and with minimal accuracy.

Key Ideas and Details (Standards 1, 2, 3)

- Recall key details from text
- Make predictions based on explicit text
- Identify cause and effect
- Identify fact and opinion in explicit text
- Make comparisons among text features based on explicit text
- Identify elements of plot
- Locate explicit main idea, central message, and theme
- Identify setting in explicit text
- Predict character's actions based on explicit text

Craft and Structure (Standards 4, 5, 6)

- Recognize simple figures of speech
- Use basic context clues to understand word meanings
- Locate key words and phrases
- Recognize the features, format, and function of basic text structures (e.g., chronology) and their impact on meaning
- State authors' basic purposes within and across text(s)
- Define basic technical terminology in content area texts

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

- Identify obvious evidence in explicit text (e.g., logical connections between sentences and paragraphs)
- Identify how the author presents fact/opinion

Partially Meets the Standards

Grade 8

When interacting with literature and informational text, students at this achievement level demonstrate the following skills with limited consistency and accuracy.

Key Ideas and Details (Standards 1, 2, 3)

- Use explicit text evidence to:
 - quote accurately and make logical conclusions
 - make generalizations and predictions
 - identify simple cause/effect relationships
 - identify fact and opinion
- Sequence plot events, real events, and steps in a process in chronological order
- Describe how key details are related to conclusions from text and identify those details
- Compare and contrast individuals and ideas based on explicit text

Summarize and/or paraphrase from a section of text or text as a whole

- explicit text evidence
- main idea
- central message
- plot
- theme
- topic
- similarities and differences among ideas and events

Distinguish among literary elements (e.g., plot, conflict, characterization, setting, theme)

Identify literary terms (e.g., ballad, ode, epic)

Craft and Structure (Standards 4, 5, 6)

Identify literary devices (e.g., allusion, soliloquy)

Identify connotations

Use context clues to understand word meanings

Define technical terminology and distinguish from nontechnical terminology across content area texts

Recognize standard transitional words (e.g., overall, lastly, moreover)

Use word structures and multiple-meaning words to construct meaning (affixes and roots)

Identify figures of speech and their connotations

Identify the features, format, and function of basic text structures (e.g., definition) and their impact on meaning

Identify author's use of perspective (personal point of view) and tone (attitude toward what she or he has written)

State authors' purpose within and across text(s)

Identify mood (emotional atmosphere of text)

Identify style (author's techniques and approach to meaning—e.g., word choice, sentence structure, use of literary devices, voice)

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Make judgments about author's credibility based on explicit text:

- locate and understand argumentation within text
- identify credible evidence
- recognize how credible information is presented in text (e.g., interviews with experts, current research)
- identify methods of argumentation (e.g., analogy, details and examples)
- recognize author's bias

Meets the Standards

Grade 8

When interacting with literature and informational text, students at this achievement level demonstrate the following skills consistently and accurately.

Key Ideas and Details (Standards 1, 2, 3)

Use implicit text evidence to:

- quote accurately and make logical conclusions
- analyze symbolism
- make generalizations and predictions

- recall cause/effect relationships
- make inferences

Sequence intricate plot events, real events, and steps in a process in chronological order

Use relevant/key details to support conclusions

Distinguish fact from opinion in a variety of implicit texts

Use evidence from the text to justify interpretations of meaning

Compare and contrast individuals and ideas based on implicit text

Summarize and/or paraphrase from a section of text or text as a whole:

- important text evidence (explicit or implicit)
- main idea
- central message
- supporting details
- plot
- subject
- theme
- topic
- similarities and differences among ideas and events

Analyze subtle use of, and connections among, literary elements within text or multiple interpretations of text (e.g., plot, conflict, characterization, setting, theme)

Differentiate methods of characterization (e.g., dialogue, appearance, behavior)

Define meaning of literary terms (ballad, ode, epic)

Compare and contrast presentation of literary elements

Craft and Structure (Standards 4, 5, 6)

Define the meaning of literary devices (e.g., assonance vs. consonance)

Connect connotations to meaning

Use reasoning and evidence to justify interpretations of word meanings

Recognize that word relationships, context, and structure lead to intended or precise word meanings

Categorize technical terminology across content area texts

Identify transitional words and phrases (e.g., formerly, despite, in any case)

Use etymology (word history) and morphology (word structure) and multiple meanings of a word or phrase to construct meaning

Analyze the use of figures of speech

Identify connotative meanings of words and phrases

Analyze the features, format, and function of complex text structures (e.g., cause and effect) and their impact on meaning

Analyze how author's message is shaped by perspective and tone

Interpret authors' purposes within and across text(s)

Identify interaction between mood and style

Recognize how author's choices impact style (e.g., impact on tone, imagery, etc.)

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Analyze authors' credibility based on sources used

Analyze methods of argumentation (e.g., painting a picture, anecdotes)

Recognize relevancy and sufficiency of evidence

Recognize validity of reasoning

Identify basic fallacies of logic (e.g., false principle, either/or, emotional appeal)

Analyze how credible information is presented within and across text(s) (e.g., statistics, testimony)
Recognize the effectiveness of persuasive argumentation
Analyze author's bias

Exceeds the Standards

Grade 8

When interacting with literature and informational text, students at this achievement level demonstrate the following skills with a high degree of consistency and efficiency.

Key Ideas and Details (Standards 1, 2, 3)

Interpret subtle implicit text evidence to:

- quote accurately from the text and make logical conclusions
- analyze symbolism
- make relevant generalizations and predictions
- understand complex cause/effect relationships
- make inferences

Analyze relevant details from text to support conclusions

Effectively paraphrase complex text

Use evidence from text to synthesize interpretations

Compare and contrast individuals and ideas in depth based on implicit text

Synthesize to arrive at meaning from a section of text, text as a whole, and across texts:

- important text evidence (explicit or implicit)
- main idea
- central message
- supporting details
- plot
- subject
- theme
- topic
- similarities and differences among ideas and events

Interpret and evaluate interrelationships among literary elements (e.g., plot, conflict, characterization, setting, theme)

Evaluate methods of characterization and their impact on other literary elements

Craft and Structure (Standards 4, 5, 6)

Evaluate author's use of literary devices (e.g., anachronism, flashback)

Describe how word relationships, context, and structure lead to implied, intended or precise word meanings

Compare and contrast figures of speech and their application and efficacy

Distinguish nuanced connotations

Analyze how connotations impact meaning

Evaluate application of technical terminology across content area texts

analyze adequacy and purpose

Analyze use of transitional devices (e.g., equally important, by comparison, although this may be true)

Evaluate the features, format, and function of complex text structures (e.g., comparison and contrast) and their impact on meaning

Analyze mood and style and their interaction and impact

Evaluate authors' purpose(s) within and across text(s)

Use evidence to analyze author's choices

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Evaluate author's credibility based on complex text(s):

- apply concepts of argumentation (background, discussion, and proof of claim)
- analyze validity of reasoning
- analyze fallacies of logic (e.g., begging the claim, ad hominem)
- analyze relevancy and sufficiency of evidence
- evaluate methods of argumentation
- evaluate subtle bias

Grade 10 Reading MCA-III Achievement Level Descriptors

Does Not Meet the Standards

Grade 10

When interacting with literature and informational text, students at this achievement level demonstrate the following skills inconsistently and with minimal accuracy.

Key Ideas and Details (Standards 1, 2, 3)

Identify explicitly stated text evidence to support:

- general conclusions and predictions
- obvious cause/effect relationships

Locate obvious literary elements within explicit text (e.g., plot, conflict, characterization, setting, theme)

Locate key/relevant details from text

Identify fact and opinion in explicit text

Identify explicit evidence in text

Compare individuals and ideas based on explicit text

Locate explicit main idea, central message, and theme

State explicit main idea, central idea, and obvious supporting details

Identify setting in a reading passage

Craft and Structure (Standards 4, 5, 6)

Identify the impact of word choices on meaning

Define basic literary devices (e.g., personification)

Use basic context and structure of words to understand word meanings

Recognize simple figures of speech

Locate key words and phrases

Recognize the features, format, and function of basic text structures (e.g., problem/solution) and their impact on meaning

State authors' basic purposes within and across text(s)

Define basic technical terminology in content area texts

Identify mood (emotional atmosphere of text)

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Identify obvious evidence in explicit text (e.g., logical connections between sentences and paragraphs)

Identify basic fallacies of logic (e.g., either/or, emotional appeal)

Identify how the author presents fact/opinion

Recognize methods of argumentation

Partially Meets the Standards

Grade 10

When interacting with literature and informational text, students at this achievement level demonstrate the following skills with limited consistency and accuracy.

Key Ideas and Details (Standards 1, 2, 3)

Use explicit text evidence to support:

- basic conclusions and simple inferences

- recognition of basic symbols
- generalizations and predictions
- cause/effect relationships

Sequence plot events, real events, and steps in a process in chronological order

Recognize explicit similarities and differences among literary elements

Describe how key details support conclusions from text and identify those details

Use evidence from text to construct meaning

Compare and contrast individuals and ideas based on explicit text

Summarize and/or paraphrase from a section of text or text as a whole:

- important text evidence (explicit or implicit)
- main idea
- central message
- supporting details
- plot
- subject
- theme
- topic
- similarities and differences among ideas and events

Identify obvious connections among literary elements within text (e.g., plot, conflict, characterization, setting, theme)

Recognize basic methods of characterization (e.g., dialogue, appearance, behavior)

Identify literary terms (e.g., motif, archetype, foil)

Determine a theme or central idea of text

Craft and Structure (Standards 4, 5, 6)

Recognize the overall effect and impact of word choices on meaning and author's style

Identify the application of literary devices (e.g., allegory)

Identify connotations

Use evidence to understand authors' choices

Recognize how word relationships, context, and structure enhance meaning

Recognize standard transitional words (e.g., simultaneously, thereafter, henceforth)

Define technical terminology and distinguish from nontechnical terminology across content area texts

Use etymology (word history) and morphology (word structure) and multiple meanings of a word or phrase to construct meaning

Identify figures of speech and their connotations

Identify the features, format, and function of basic text structures (e.g., comparison and contrast) and their impact on meaning.

Identify author's use of perspective (personal point of view) and tone (attitude toward what she or he has written)

State authors' main purpose within and across text(s)

Identify style (author's techniques and approach to meaning—e.g., word choice, sentence structure, use of literary devices, voice)

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Recognize how credible information is presented within and across text(s) (e.g., interviews with experts, current research)

Make judgments about authors' credibility based on explicit text(s):

- identify methods of persuasive argumentation (e.g., inductive/deductive reasoning, empathy, prestigious spokesperson)
- identify credible evidence
- analyze evidence based on sources used
- identify basic fallacies of logic (e.g. circular argument, slippery slope)
- recognize author's bias

Meets the Standards

Grade 10

When interacting with literature and informational text, students at this achievement level demonstrate the following skills consistently and accurately.

Key Ideas and Details (Standards 1, 2, 3)

Use implicit text evidence to support:

- conclusions and inferences
- analyses of symbolism
- generalizations and predictions
- purpose of cause/effect relationships

Sequence intricate plot events, real events, and steps in a process in chronological order

Use relevant/key details to support conclusions

Distinguish fact from opinion in a variety of implicit texts

Use evidence from the text to justify interpretations of meaning

Compare and contrast individuals and ideas based on implicit text

Summarize and/or paraphrase from a section of text or text as a whole:

- important text evidence (explicit or implicit)
- main idea
- central message
- supporting details
- plot
- subject
- theme
- topic
- similarities and differences among ideas and events

Analyze interrelationships among literary elements within text or multiple interpretations of text (e.g., plot, conflict, characterization, setting, theme)

Determine a theme or central idea of text(s) and analyze in detail its development over the course of text(s), including how it emerges and is shaped and refined by specific details

Differentiate methods of characterization

Define meaning of literary terms (e.g., motif, archetype, foil)

Compare and contrast presentation of literary elements

Craft and Structure (Standards 4, 5, 6)

Interpret words and phrases as they are used in text, including determining technical, connotative, and figurative meanings

Connect connotations to meaning

Analyze the cumulative effect and specific impact of word choices on meaning and author's style

Evaluate the use of literary devices (e.g., stream of consciousness)
Use reasoning and evidence to justify interpretations of word meanings
Analyze how authors' choices affect style (e.g., how the specific use of language and rhetoric, text structure and organization, graphics, and voice contribute to presentation of plot, theme, setting, concept building, and argumentation)
Recognize that word relationships, context, and structure lead to intended or precise word meanings
Categorize technical terminology across content area texts
Identify transitional words and phrases (e.g., to segue, as has been noted, at this point)
Analyze the use of figures of speech
Analyze the features, format, and function of complex text structures (e.g., process analysis) and their impact on meaning
Analyze how author's message is shaped by perspective and tone
Interpret author's main purpose within and across text(s)
Analyze mood and style and their interaction and impact
Recognize how author's choices impact style (e.g., impact on tone, imagery)

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Analyze how credible information is presented within and across text(s)

Analyze authors' credibility based on complex text(s):

- analyze methods of persuasive argumentation (e.g., ethos, pathos, logos)
- analyze relevancy and sufficiency of evidence
- analyze complex fallacies of logic (e.g., false analogy, red herring)
- analyze validity of reasoning
- analyze author's bias

Exceeds the Standards

Grade 10

When interacting with literature and informational text, students at this achievement level demonstrate the following skills with a high degree of consistency and efficiency.

Key Ideas and Details (Standards 1, 2, 3)

Interpret subtle implicit text to support:

- conclusions and inferences
- analyses of symbolism
- generalizations and predictions
- explanations of cause/effect relationships

Paraphrase complex text clearly

Evaluate relevant details that support conclusions from text

Analyze the relationship of fact and opinion in a variety of implicit texts

Use inferential and literal evidence from text to justify interpretations of meaning

Compare and contrast individuals and ideas in depth based on implicit text

Synthesize from a section of text, text as a whole, or across texts to arrive at meaning:

- important text evidence (explicit or implicit)
- main idea
- central message
- supporting details

- plot
- subject
- theme
- topic

Interpret and evaluate complex interrelationships among literary elements within text or multiple interpretations of text (e.g., plot, conflict, characterization, setting, theme)

Evaluate a theme or central idea of text(s) and analyze in detail its development over the course of text(s), including how it emerges and is shaped and refined by specific details

Evaluate methods of characterization and their impact on other literary elements

Interpret and explain the meaning of literary terms and elements

Compare and contrast the development and use of literary elements and devices

Craft and Structure (Standards 4, 5, 6)

Evaluate efficacy of words and phrases as they are used in text

Compare and contrast complex figures of speech and their application and efficacy

Distinguish nuanced connotations

Analyze how connotations impact meaning

Distinguish among connotative and figurative meanings of words and phrases

Evaluate the cumulative effect and specific impact of word choices on meaning and author's style

Evaluate sophisticated literary devices (e.g., iambic pentameter vs. iambic tetrameter)

Evaluate application of technical terminology across content area texts

Analyze adequacy and purpose

Analyze how word relationships, context, and structure lead to intended or precise word meanings

Use reasoning and evidence to understand complex vocabulary

Analyze use of transitional devices (e.g., balanced against, vis a vis, in relation to, all things considered)

Evaluate the features, format, and function of complex text structures (e.g., classification) and their impact on meaning

Evaluate authors' choices and purpose(s) within and across text(s)

Analyze the effectiveness of author's stylistic choices as they impact message and meaning

Integration of Knowledge and Ideas (Standard 8, Informational Text sub-strand only)

Understand how and why credible evidence and arguments are presented within and across text(s)

Evaluate authors' credibility based on sophisticated text(s):

- evaluate methods of persuasive argumentation
- evaluate relevancy and sufficiency of evidence
- evaluate subtle fallacies of logic (e.g., straw man, post hoc ergo propter hoc)
- evaluate validity of reasoning
- evaluate subtle bias

Achievement Level Descriptors

Minnesota Comprehensive Assessments – Series III (MCA)

Science, Grades 5, 8 and High School

Standards revision	2009
First operational test administration	Spring 2012
Achievement Level Descriptors approved	July 2012

Grade 5 Science MCA-III Achievement Level Descriptors

Does Not Meet the Standards

Grade 5

Students at this level of science succeed at few of the most fundamental science skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Nature of Science and Engineering

- Understands that science is used to investigate and answer questions
- Uses appropriate tools and creates graphs in a scientific investigation

Physical Science

- Knows that temperature changes in water can cause changes in state (liquid, gas, solid)
- Recognizes that vibrations cause sound
- Identifies the type of force that starts an object moving

Earth and Space Science

- Recognizes all forms of collection in the water cycle
- Identifies events that change the Earth's surface
- Observes the daily and seasonal changes in the position of the Sun

Life Science

- Identifies similarities between parents and offspring
- Describes the structures of plants and animals
- Recognizes the roles of the body's defense systems and vaccinations
- Sorts organisms into groups based on observable characteristics
- Identifies differences that may give individuals an advantage in survival

Partially Meets the Standards

Grade 5

Students at this level of science partially meet the science skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Nature of Science and Engineering

- Recognizes effects that science has on the natural world
- Recognizes unfair comparisons in an investigation
- Selects appropriate ways (e.g., graphs, tables) to present data from a controlled experiment
- Understands the steps in the engineering design process

Physical Science

- Knows that temperature changes can cause changes in state in common substances (air, water)
- Describes how vibration affects pitch
- Builds a simple electrical circuit
- Recognizes ways heat energy can be generated
- Identifies that magnets can repel or attract
- Recognizes how the size of a force affects motion
- Identifies simple machines (e.g., lever, wedge, ramp)

Earth and Space Science

- Identifies erosion as a process that changes Earth's surface
- Identifies different forms of water in some parts of the water cycle
- Recognizes apparent changes in the moon's shape

Life Science

- Recognizes differences between plants and animals
- Recognizes how an organism's interactions with other organisms and its habitat may be beneficial or harmful
- Differentiates between inherited and acquired characteristics

Meets the Standards

Grade 5

Students at this level of science meet the science skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Nature of Science and Engineering

- Recognizes how scientific knowledge is used and communicated
- Identifies questions that can be investigated scientifically
- Recognizes the processes, evidence, logic and controls of scientific investigations
- Identifies the constraints, advantages and disadvantages of engineering design solutions

Physical Science

- Describes changes in the properties of substances when they are heated and cooled
- Describes how light interacts with objects
- Labels the parts of an electrical circuit
- Identifies conductors and insulators
- Describes how simple machines affect force and motion

Earth and Space Science

- Knows how weathering and erosion form features of the Earth's surface
- Understands the relationships between all parts of the water cycle
- Models the orbits of the Moon, Earth and Sun

Life Science

- Describes the structures and functions of living organisms
- Understands the relationships between the living and nonliving parts of an ecosystem
- Recognizes how differences in individuals may give an advantage in survival and reproduction
- Identifies the flow of energy between organisms

Exceeds the Standards

Grade 5

Students at this level of science exceed the science skills of the Minnesota Academic Standards. Some of the skills demonstrated very consistently may include:

Nature of Science and Engineering

- Recognizes the role of critical review in science
- Describes different types of investigations and which variables are controlled and not controlled
- Writes conclusions using data obtained from investigations
- Suggests engineering design solutions to solve a problem

Physical Science

Compares and contrasts states of matter using mass, shape and volume
Describes the relationship between electricity and magnetism

Earth and Space Science

Compares observations of seasonal changes in the Sun's position

Life Science

Identifies specific differences in an individual organism and how these differences may affect individual survival and reproduction
Identifies plant structures that assist in growth and reproduction

Grade 8 Science MCA-III Achievement Level Descriptors

Does Not Meet the Standards

Grade 8

Students at this level of science succeed at few of the most fundamental science skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Nature of Science and Engineering

- Identifies scientific questions
- Chooses an appropriate tool for an investigation
- Identifies variables that change and that stay the same in simple investigations

Physical Science

- Identifies changes that occur when water is heated or cooled
- Distinguishes between mixtures and pure substances

Earth and Space Science

- Identifies the oldest rock layers in sedimentary rock, identifies the location and use of major water reservoirs on the earth
- Recognizes that earth is composed of layers
- Recognizes that the Sun is our principal source of energy on Earth

Life Science

- Recognizes that cells contain genes
- Recognizes the differences between plant and animal cells
- Identifies relationships among populations in a stable ecosystem

Partially Meets the Standards

Grade 8

Students at this level of science partially meet the science skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Nature of Science and Engineering

- Uses a measuring tool and appropriate units of measurement in an investigation
- Evaluates conclusions from a scientific investigation as personal opinion or scientific fact
- Identifies scientific questions and their appropriate methods of investigation
- Recognizes the importance of learning from past failures to guide designs
- Converts metric units

Physical Science

- Recognizes that there are approximately 100 elements with different properties
- Identifies forces acting on an object
- Distinguishes between kinetic and potential energy
- Identifies amplitude and wavelength of waves

Earth and Space Science

- Recognizes that landforms are built up and broken down by natural processes
- Organizes fossils based on age in sedimentary rock layers
- Relates tectonic motion to earthquakes
- Describes the properties of layers of earth
- Describes the transfer of water between major water reservoirs on the Earth

Recognizes that the atmosphere has many layers with different properties
Recognizes that the Sun is the primary force that affects weather, climate, and air and ocean currents

Life Science

Recognizes that variations exist in every population
Understands the relationship between predator and prey
Recognizes that genes determine inherited traits of an organism
Uses anatomical structures to infer relationships between living organisms and fossils
Recognizes the function of nerve and muscle cells
Recognizes that viruses can interfere with normal body function
Identifies human activities that change populations in stable ecosystems

Meets the Standards

Grade 8

Students at this level of science meet the science skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Nature of Science and Engineering

Plans and conducts a controlled experiment
Generates a scientific conclusion from an investigation
Applies an engineering design process to construct a product or system
Uses maps and other data sets to describe local patterns and predictions

Physical Science

Calculates density
Uses atoms and molecules to describe the differences between elements and compounds
Knows that the mass of an object stays the same when it changes form
Describes physical and chemical changes in matter
Identifies how the sum of forces on an object affects motion
Calculates the speed of an object
Describes different forms of energy and their transformations
Describes how heat is transferred
Analyzes potential and kinetic energy conversions
Describes waves and their properties

Earth and Space Science

Identifies how natural processes form a variety of landforms
Infers relative ages of rock sequences by interpreting successive sedimentary rock layers and their fossils
Describes the effects mass and distance have on the force of gravity
Recognizes the effect of the rotation and revolution of Earth on air and ocean currents, seasons, length of a day and phases of the moon
Describes the formation of fossil fuels
Describes the distribution of materials through the processes of the water cycle
Identifies the effect of the jet stream on weather patterns

Life Science

Describes how the organ systems interact in vertebrate organisms
Identifies energy changes from producers, consumers and decomposers in an ecosystem

- Recognizes the products of photosynthesis
- Understands the differences between sexual and asexual reproduction
- Distinguishes between inherited and acquired characteristics
- Describes how genetic variation can impact an organism's ability to survive
- Identifies how human activities impact ecosystems
- Recognizes the human immune system's ability to protect against foreign substances that enter the body

Exceeds the Standards

Grade 8

Students at this level of science exceed the science skills of the Minnesota Academic Standards. Some of the skills demonstrated very consistently may include:

Nature of Science and Engineering

- Uses appropriate measurements, graphs and analysis to describe global natural and designed systems
- Recognizes how economic, political, social and ethical expectations influence engineering design solutions and scientific investigations

Physical Science

- Explains an object's motion using graphs
- Relates light wave lengths to specific colors
- Understands the relationships of frequency to wavelength
- Explains density using the particle model of matter

Earth and Space Science

- Identifies how the structure of the atmosphere affects energy absorption
- Analyzes the effects of pressure systems on wind direction and weather conditions

Life Science

- Explains how the living and nonliving factors influence the number of populations an ecosystem can support
- Explains the flow of energy through an ecosystem

High School Science MCA-III Achievement Level Descriptors

Does Not Meet the Standards

High School

Students at this level of science succeed at few of the most fundamental science skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Nature of Science and Engineering

- Determines the appropriate safety procedures for a scientific investigation
- Understands what a hypothesis is
- Identifies the benefits of using scientific models

Life Science

- Understands that photosynthesis converts light energy into chemical energy
- Identifies how competition for resources affects population growth
- Recognizes the primary function of DNA
- Identifies how air quality affects personal health

Partially Meets the Standards

High School

Students at this level of science partially meet the science skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Nature of Science and Engineering

- Identifies sources of error in an investigation
- Understands that engineering designs are continually checked so that they can be improved
- Recognizes that scientific knowledge occurs in steps that build on prior knowledge
- Selects appropriate graphical representations to communicate results
- Identifies a scientific hypothesis

Life Science

- Uses words to describe the process of photosynthesis
- Identifies DNA, genes and chromosomes
- Matches base pairs of DNA
- Recognizes characteristics of sexual and asexual reproduction
- Recognizes that genetic variation is essential for natural selection to occur
- Identifies the ecological risks and benefits of changing a natural ecosystem by human activity
- Identifies inputs and expected outputs of simple natural and designed systems
- Understands how organisms respond to changes in the environment
- Recognizes that the human body produces antibodies to fight disease
- Uses homologous structures to show evolutionary relationships among species

Students at this level of science meet the science skills of the Minnesota Academic Standards. Some of the skills demonstrated may include:

Nature of Science and Engineering

- Describes how changes in scientific knowledge usually builds on earlier knowledge
- Explains how bias might influence how research is done and the interpretation of data
- Recognizes that risk analysis is used to evaluate consequences of an engineered solution
- Evaluates possible solutions to an engineering problem at a local and regional level
- Uses appropriate numeric, or graphical representations to communicate a scientific idea
- Suggests ways to improve data collection
- Designs and conducts an experiment to test a hypothesis

Life Science

- Explains how cell parts and processes respond to environmental factors and their functions in respiration, reproduction and photosynthesis
- Identifies primary functions of some biological molecules
- Describes the role of DNA and RNA in assembling protein molecules
- Recognizes how internal and external factors affect biological systems
- Explains how energy is transferred among organisms in an ecosystem
- Uses equations to differentiate between photosynthesis and respiration
- Uses Mendel's laws of segregation and independent assortment to explain variations in a species
- Uses the principles of natural selection to explain the differential survival of offspring
- Uses a variety of evidence to show evolutionary relationships
- Describes the economic and social risks and benefits of changing a natural ecosystem by human activity
- Understands how the human body responds to external and internal factors

Students at this level of science exceed the science skills of the Minnesota Academic Standards. Some of the skills demonstrated very consistently may include:

Nature of Science and Engineering

- Formulates a hypothesis and conducts an experiment to test this hypothesis
- Supports a conclusion with evidence from the investigation
- Develops possible solutions to an engineering problem in a global context

Life Science

- Recognizes structures of biological molecules
- Describes and differentiates between the processes of replication, transcription and translation of nucleic acids
- Understands the consequences of human activity on living organisms and ecosystems
- Describes matter transformations and the dissipation of energy as heat in a natural ecosystem