Missouri Assessment Program Grade-Level Assessments

Guide to Interpreting Results

Communication Arts, Mathematics, and Science

Revised 2013

2704941

This guide has been prepared by CTB/McGraw-Hill to provide an overview for interpreting reports generated from the Missouri Assessment Program (MAP). It is intended to help educators apply MAP data to the needs of individual students and the district as a whole.

Table of Contents

Introduction

Educational Assessment: A Primary Tool

Assessment, or testing, fulfills a vital role in today's educational environment. Assessment results often are a major force in shaping public perceptions about the capabilities of our students and the quality of our schools. As a primary tool for educators and policymakers, assessment is used for many important purposes. Educators use assessment results to help improve teaching and learning and to evaluate programs and schools. Policy decisions are often based, in part, on assessment data. Because of its important role, educational assessment is used in every school, district, and state. It is vital to innovation, higher standards, and educational excellence.

The **Missouri Assessment Program (MAP)** is one of several educational reforms mandated by the Outstanding Schools Act of 1993. As a result of this act, the State Board of Education directed the Missouri Department of Elementary and Secondary Education (DESE) to identify the knowledge, skills, and competencies that Missouri students should acquire by the end of certain grade levels and to evaluate student progress toward those academic standards. The Department engaged teachers, school administrators, parents, and business professionals throughout the state to develop the Show-Me Standards/GLE Strands and the assessment system that evaluates students' proficiencies as represented by the Show-Me Standards/GLE Strands.

The Spring 2013 MAP includes the following assessments:

Required

Communication Arts, Grades 3–8
Mathematics, Grades 3–8
Science, Grades 5 and 8

Each assessment requires three to five hours of test administration time and may include any of three types of test items: **selected-response items, constructed-response items,** and **performance events** (including writing prompts).

The **selected-response (also known as multiple-choice) items** present students with a question followed by three to five response options. A subset of selected-response items are taken from the Survey edition of *TerraNova*®, a nationally normed test developed by CTB/McGraw-Hill.

The **constructed-response items** require students to supply (rather than select) an appropriate response. Students are asked to show their work when answering questions. In addition to measuring students' content knowledge, constructed-response items provide information about how students arrive at their answers.

The **performance events** used in Missouri's statewide assessment require students to work through more complicated items. Performance events often allow for more than one approach to get a correct answer. The advantage of this type of assessment item is that it provides insight into a student's ability to apply knowledge and understanding in real-life situations.

The writing prompt, a special type of performance event that appears in the Communication Arts assessment, is an open-ended item that requires students to demonstrate their writing proficiency. Writing is scored holistically using a four-point scoring guide.

The Department uses the information obtained through MAP to monitor the progress of Missouri's students toward meeting the Show-Me Standards/GLE Strands in order to inform the public and the state legislature about student performance and to help make informed decisions about educational issues. The information obtained through MAP provides the data that drive student services throughout the state.

The **MAP reports** provide useful information for determining the performance of students, in addition to their performance in the classroom. Emphasis should be placed on identifying students who are below proficiency in a particular test area so that a course of action may be determined that will meet the students' specific needs. Consider the use of locally designed formative and summative assessments aligned to the Show-Me Standards/GLE Strands to provide more detailed information for each student in specific test areas.

Show-Me Content Standards/GLE Strands

MAP items are aligned with the Show-Me Content Standards/GLE Strands. The Show-Me Content Standards/GLE Strands are grouped by content area.

Communication Arts Content Standards

In Communication Arts, students in Missouri public schools will acquire a solid foundation that includes knowledge of and proficiency in:

1. speaking and writing Standard English (including grammar, usage, punctuation, spelling, capitalization)
2. reading and evaluating fiction, poetry, and drama
3. reading and evaluating nonfiction works and material (such as biographies, newspapers, technical manuals)
4. writing formally (such as reports, narratives, essays) and informally (such as outlines, notes)
5. comprehending and evaluating the content and artistic aspects of oral and visual presentations (such as story-telling, debates, lectures, multi-media productions)
6. participating in formal and informal presentations and discussions of issues and ideas
7. identifying and evaluating relationships between language and culture

Mathematics GLE Strands

In Mathematics, students in Missouri public schools will acquire a solid foundation that includes knowledge of:

1. **Number and Operations**
   addition, subtraction, multiplication, and division; estimation and computing techniques; number representations, systems, and relationships; use of these operations and concepts in the workplace and other situations
2. **Algebraic Relationships**
   algebraic concepts including patterns, relations, and functions; represent and analyze mathematical structures using algebraic symbols; understand quantitative relationships; analyze change in various contexts
3. **Geometric and Spatial Relationships**
   geometric and spatial sense including analysis of characteristics/properties of geometric shapes; arguments about geometric relationships; coordinate geometry; symmetry and transformations; visualization, spatial reasoning, and geometric modeling
4. **Measurement**
   measurable attributes of objects and the units, systems, and processes of measurement; use of appropriate techniques, tools, and formulas to determine measurements
5. **Data and Probability**
   data collection and statistical reasoning; formulating questions to be addressed with data analysis and statistics; develop and evaluate inferences based on data; understand and apply probability concepts

Science GLE Strands

In Science, students in Missouri public schools will acquire a solid foundation that includes knowledge of:

1. properties and principles of matter and energy
2. properties and principles of force and motion
3. characteristics and interactions of living organisms
4. changes in ecosystems and interactions of organisms with their environments
5. processes (such as plate movement, water cycle, air flow) and interactions of earth's biosphere, atmosphere, lithosphere and hydrosphere
6. composition and structure of the universe and the motions of the objects within it
7. processes of scientific inquiry (such as formulating and testing hypotheses)
8. impact of science, technology and human activity on resources and the environment

Show-Me Performance Standards

The Show-Me Performance Standards are grouped by goals. For a more detailed explanation of the performance standards, refer to the Show-Me Standards/GLE Strands document or the DESE website (http://dese.mo.gov/standards).

Goal 1—Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.

Students will demonstrate within and integrate across all content areas the ability to

1. develop questions and ideas to initiate and refine research
2. conduct research to answer questions and evaluate information and ideas
3. design and conduct field and laboratory investigations to study nature and society
4. use technological tools and other resources to locate, select and organize information
5. comprehend and evaluate written, visual and oral presentations and works
6. discover and evaluate patterns and relationships in information, ideas and structures
7. evaluate the accuracy of information and the reliability of its sources
8. organize data, information and ideas into useful forms (including charts, graphs, outlines) for analysis or presentation
9. identify, analyze and compare the institutions, traditions and art forms of past and present societies
10. apply acquired information, ideas and skills to different contexts as students, workers, citizens and consumers

Goal 2—Students in Missouri public schools will acquire the knowledge and skills to communicate effectively within and beyond the classroom.

Students will demonstrate within and integrate across all content areas the ability to

1. plan and make written, oral and visual presentations for a variety of purposes and audiences
2. review and revise communications to improve accuracy and clarity
3. exchange information, questions and ideas while recognizing the perspectives of others
4. present perceptions and ideas regarding works of the arts, humanities and sciences
5. perform or produce works in the fine and practical arts
6. apply communication techniques to the job search and to the workplace
7. use technological tools to exchange information and ideas

Goal 3—Students in Missouri public schools will acquire the knowledge and skills to recognize and solve problems.

Students will demonstrate within and integrate across all content areas the ability to

1. identify problems and define their scope and elements
2. develop and apply strategies based on ways others have prevented or solved problems
3. develop and apply strategies based on one's own experience in preventing or solving problems
4. evaluate the processes used in recognizing and solving problems
5. reason inductively from a set of specific facts and deductively from general premises
6. examine problems and proposed solutions from multiple perspectives
7. evaluate the extent to which a strategy addresses the problem
8. assess costs, benefits and other consequences of proposed solutions

Goal 4—Students in Missouri public schools will acquire the knowledge and skills to make decisions and act as responsible members of society.

Students will demonstrate within and integrate across all content areas the ability to

1. explain reasoning and identify information used to support decisions
2. understand and apply the rights and responsibilities of citizenship in Missouri and the United States
3. analyze the duties and responsibilities of individuals in societies
4. recognize and practice honesty and integrity in academic work and in the workplace
5. develop, monitor and revise plans of action to meet deadlines and accomplish goals
6. identify tasks that require a coordinated effort and work with others to complete those tasks
7. identify and apply practices that preserve and enhance the safety and health of self and others
8. explore, prepare for and seek educational and job opportunities

Assessment Terms and Types of Scores

Familiarity with the testing terms and the types of scores used in the MAP reports and other components will help you interpret test information accurately and efficiently.

MAP Scale Score

CTB/McGraw-Hill uses the students' correct responses to derive a MAP scale score. The scale score describes achievement on a continuum that in most cases spans the complete range of Grades 3–8. These scores range in value from 455 to 875 for Communication Arts, 450 to 885 for Mathematics, and 470 to 895 for Science. Within a content area, scores from adjacent grades may be compared. Scale scores cannot be compared across content areas. For example, it is appropriate to compare a student's Grade 5 Mathematics scale score with his or her Grade 6 Mathematics scale score. The MAP scale score determines the student's achievement level. The MAP scale score ranges for each achievement level can be found beginning on page 5 of this guide. Within a content area, scale scores can be added, subtracted, and averaged. A student receives a MAP scale score when he or she makes a valid attempt in any content area.

Achievement Levels

Student performance can be reported in terms of four performance, or achievement, levels that describe a pathway to proficiency. Each achievement level represents standards of performance for each assessed content area (Communication Arts, Mathematics, and Science). Panels drawn from educational, business, and professional communities determined the achievement standards. Achievement-level scores provide a description of what students can do in terms of the content and skills assessed, as described in the Grade Level Expectations (GLEs).

TerraNova National Percentile

National Percentiles (NPs) are determined from a subset of items within the Communication Arts, Mathematics, and Science tests. These items comprise the nationally norm-referenced *TerraNova* Survey. The NPs indicate what percentage of students' scores in the norming sample for a given grade fell below a certain point. For example, a student who is at the twenty-fifth NP scored higher than 25 percent of the norm group. The fiftieth percentile is the middle score—also called the *median*—above and below which half the students scored. The NPs should not be added, subtracted, or averaged. The NPs are based on normative data collected in 2005.

Valid Attempt and Level Not Determined (LND)

A valid attempt on the MAP test is necessary in order to receive a MAP scale score. If a valid attempt is not made, a student may receive "Level Not Determined" (LND) instead of a MAP scale score. Students that receive LND are not assigned to an achievement level. Students may receive LND for any of the following reasons:

- A blank test book is returned to CTB/McGraw-Hill.
- A student does not attempt any items in one or more content areas of the MAP test.
- A student is absent for all testing sessions.

Standard Error of Measurement

No test provides a perfect measure of a student's ability. This situation is expected because all tests have a known Standard Error of Measurement (SEM). The SEM reports the amount of variability that can be expected in a student's test score due to the inherent imprecision of the test. The SEM for the MAP test will be reported in the 2013 MAP Technical Report.

Achievement-Level Descriptors

Communication Arts, Abbreviated Achievement-Level Descriptors

Grade 3

Below Basic

Reading—Students locate information in text; identify an obvious main idea; define simple words and phrases. Writing—Students show minimal awareness of audience; attempt to create friendly letters.

MAP score range: 455–591.

Basic

Reading—Students make simple comparisons; recall simple sequence of events; make obvious inferences and predictions; use context clues to determine word meaning. Writing—Students use basic parts of speech correctly in simple sentences; show minimal awareness of audience and use some detail.

MAP score range: 592–647.

Proficient

Reading—Students locate/identify supporting details, obvious cause and effect; make inferences; use context clues to determine word meaning; make comparisons; recall detailed sequence of events; identify solutions and fact vs. fiction; recognize figurative language; draw obvious conclusions. Writing—Students generally use rules of Standard English; show awareness of audience and include relevant details.

MAP score range: 648–672.

Advanced

Reading—Students identify relevant/supporting information to make predictions and draw conclusions; infer word meaning; infer main idea; make complex comparisons; make complex inferences; categorize information; identify correct sequence of events. Writing—Students consistently apply rules of Standard English; have an awareness of audience; use detail effectively.

MAP score range: 673–790.

Grade 4

Below Basic

Reading—Students locate information in text; recall stated information; draw obvious conclusions; make simple comparisons and descriptions. Writing—Students write simple letters, minimally use the rules of Standard English; attempt to organize information.

MAP score range: 470–611.

Basic

Reading—Students identify appropriate details; use context clues; make obvious inferences; select vocabulary using context clues. Writing—Students write simple letters with an awareness of an intended audience and purpose; generally use the rules of Standard English.

MAP score range: 612–661.

Proficient

Reading—Students make simple inferences; recall, identify, and use relevant information; draw conclusions; explain figurative language and main idea; use context clues to select vocabulary; identify character traits, sensory details, and simple cause and effect. Writing—Students show organization and awareness of an intended audience and purpose; use the rules of Standard English; use a writing process to revise, edit, and proofread.

MAP score range: 662–690.

Advanced

Reading—Students make complex inferences and comparisons; evaluate simple information; infer cause/effect and word meaning; interpret figurative language; identify author's purpose; identify complex problems/solutions; explain complex main ideas. Writing—Students consistently use the rules of Standard English.

MAP score range: 691–820.

Grade 5

Below Basic

Reading—Students locate/identify information in text; draw simple conclusions; make obvious inferences and predictions; identify character traits. Writing—Students use correct letter writing format; partially organize information.

MAP score range: 485–624.

Basic

Reading—Students identify supporting details, problems/solutions; use context clues; make obvious inferences; give partial summary of action. Writing—Students edit for Standard English.

MAP score range: 625–674.

Proficient

Reading—Students interpret figurative language; infer main idea; identify author's purpose, point of view, the sequence of information, cause/effect, the meaning of vocabulary; summarize; distinguish between fact and opinion; draw conclusions; make inferences and comparisons; support a position. Writing—Students use the rules of Standard English; construct complex sentences; edit for appropriate support; organize information.

MAP score range: 675–701.

Advanced

Reading—Students interpret and draw conclusions from complex information; analyze complex characters; infer author's purpose and word meaning; categorize information; make simple evaluations and judgments; determine the appropriateness of a source and the accuracy of information. Writing—Students consistently use the rules of Standard English; use a writing process to organize information.

MAP score range: 702–840.

Communication Arts, Abbreviated Achievement-Level Descriptors

Grade 6

Below Basic

Reading—Students locate/identify information in text; make simple inferences; identify main idea, sensory information, figurative language, simple problems or solutions. Writing—Students show awareness of audience and letter format; use simple organizational techniques and graphic organizers; use simple rules of Standard English.

MAP score range: 505–630.

Basic

Reading—Students identify supporting information, simple cause/effect relationships, conflicts, point of view and problem-solving processes. Writing—Students use correct letter writing format; generally use the rules of Standard English including spelling; revise; have a controlling idea.

MAP score range: 631–675.

Proficient

Reading—Students identify author's purpose, supporting details, point of view; describe character traits, plot; identify problems/solutions; support a position with text-based details; draw conclusions; interpret figurative language; make inferences and predictions; locate resources. Writing—Students use the rules of Standard English; construct complex sentences; write for an audience and purpose; organize information.

MAP score range: 676–703.

Advanced

Reading—Students make complex connections; analyze complex characters; evaluate the accuracy and importance of information; draw conclusions and make inferences from complex information; analyze complex characters; determine cause and effect; paraphrase. Writing—Students demonstrate consistent use of a controlling idea and Standard English.

MAP score range: 704–855.

Grade 7

Below Basic

Reading—Students locate and apply information in text; identify figurative language, text elements, problems/solutions, and character traits; make obvious predictions. Writing—Students organize information; use some components of letter writing format; show minimal awareness of audience and purpose; minimally use rules and conventions of Standard English.

MAP score range: 515–633.

Basic

Reading—Students identify text-based details; identify main idea; make simple summaries; identify the meaning of figurative language; draw simple conclusions; make simple inferences. Writing—Students show some awareness of audience; use some relevant details; generally use the rules of Standard English.

MAP score range: 634–679.

Proficient

Reading—Students make inferences; summarize; make comparisons and predictions using complex text; analyze characters; determine word meaning, point of view, supporting information; locate resources. Writing—Students use relevant details; write for a specific audience; use rules and conventions of Standard English.

MAP score range: 680–711.

Advanced

Reading—Students interpret complex figurative language and vocabulary; support a position; make predictions; summarize, analyze, and synthesize information and techniques; paraphrase ideas. Writing—Students consistently use the rules and conventions of Standard English; use details effectively; target specific audience.

MAP score range: 712–865.

Grade 8

Below Basic

Reading—Students identify author's purpose, figurative language, plot, and setting; use context clues to choose vocabulary. Writing—Students create a graphic organizer; write a basic paragraph; show some awareness of audience.

MAP score range: 530–638.

Basic

Reading—Students define simple vocabulary; identify main idea; draw simple conclusions; make simple inferences; recall details from text; determine reliability of resources. Writing—Students write a paragraph to a specific audience.

MAP score range: 639–695.

Proficient

Reading—Students summarize; infer vocabulary meaning and cause/effect; interpret figurative language; analyze text features; follow multi-step directions; identify author's technique; analyze text; make inferences, interpretations, predictions, comparisons, using complex material; evaluate evidence, reliability of resources. Writing—Students edit for relevant details and purpose; organize and edit text; consistently use rules/conventions of Standard English.

MAP score range: 696–722.

Advanced

Reading—Students analyze complex information, author's purpose, characters; synthesize information; summarize complex ideas; make complex inferences. Writing—Students edit text correctly applying the rules/conventions of Standard English.

MAP score range: 723–875.

Mathematics, Abbreviated Achievement-Level Descriptors

Grade 3

Below Basic

Students use multiplication to model situations; recognize that addition and subtraction are inverse operations; add 2-digit numbers; apply subtraction skills; extend shapes or numbers in a pattern; use number sentences to model situations; use transformations to check congruency of shapes; recognize a line of symmetry; use an appropriate unit on a ruler to measure length; estimate length; interpret information from graphs.

MAP score range: 450–567.

Basic

Students estimate with less-than and greater-than; sort items by size; apply regrouping for adding and subtracting 3-digit numbers; order 3-digit whole numbers; count using numbers and pictures; identify and explain a pattern; use an appropriate unit of measurement; read thermometers; read analog clocks to nearest 5 minutes; use a ruler to measure to the nearest centimeter; compare data; transfer data to graphs.

MAP score range: 568–627.

Proficient

Students identify odd/even numbers; locate landmark numbers; describe change using increase/decrease; perform basic division of 2-digit whole numbers; identify and locate fractional parts; set up/solve simple word problems; recognize 2-D and 3-D shapes; combine 3-D solids; identify 2-D faces of 3-D objects; determine perimeter of polygons; identify appropriate units of measure; add monetary values up to $5.00; use calendars to determine dates; estimate length with fractions.

MAP score range: 628–666.

Advanced

Students estimate and justify results of addition/subtraction of numbers; represent a mathematical situation as a number sentence or an expression; identify multiple lines of symmetry; determine change from $5.00 including different combinations of coins; predict events as likely or unlikely.

MAP score range: 667–780.

Grade 4

Below Basic

Students write and compare decimals to the hundredths place; identify a fraction as a part of a whole; describe the results of combining shapes; identify parallel lines; estimate linear measurements; read and compare data on a bar graph; complete tables; create tables or graphs to represent data.

MAP score range: 465–595.

Basic

Students use multiplication to solve problems; analyze patterns using words, tables, and graphs; identify the missing value in a number sentence; identify 2-D and 3-D shapes and attributes; identify the results of transformations; tell time to the nearest minute; use benchmarks to estimate linear measurements; transfer numerical data to a graph; propose and justify conclusions that are based on data.

MAP score range: 596–650.

Proficient

Students compare parts of a whole as fractions; identify place value up to 6-digit whole numbers; decompose/compose whole numbers; represent multiplication using sets/arrays; divide 3-digit by 1-digit numbers; write a number sentence; describe movement on grid using geometric vocabulary; identify lines of symmetry; use standard/metric units to measure; add/subtract money values to $10.00; determine area on grid; read/interpret data on a line plot; analyze and explain data.

MAP score range: 651–687.

Advanced

Students describe constant rates of change; identify strategies to solve problems; describe numeric and geometric patterns; solve problems using graphs, tables, or number sentences; construct a figure with one line of symmetry; estimate measurement of angles; determine change from $10.00; identify equivalent linear measures within a system; count combinations of items.

MAP score range: 688–805.

Grade 5

Below Basic

Students recognize equivalent representations of numbers by composing and decomposing numbers up to 5 digits; order decimals to thousandths place; interpret place value to hundred-thousands; determine operations used in numeric patterns; use symmetry to complete figures; make generalizations about geometric patterns; describe attributes of 2-D shapes; identify data on a line graph; make and justify predictions using data; describe, compare, and organize data in a bar graph.

MAP score range: 480–604.

Basic

Students identify place value to the millions place; read, write, and compare unit fractions and decimals to the thousandths place; identify lines of symmetry; identify appropriate units of area; identify appropriate units of measure; use data to create a bar graph and perform calculations using numbers between given intervals.

MAP score range: 605–667.

Proficient

Students multiply decimals to the hundredths place; use estimation in computations; divide 3-digit by 2-digit numbers; add fractions with like denominators; solve problems involving rates of change; extend numeric patterns; complete number sentences; identify faces of 3-D and similar figures; interpret direction on a coordinate grid; calculate area using a grid; compute elapsed time in hours; analyze data in line graphs and tables; explain the probability of a simple event.

MAP score range: 668–705.

Advanced

Students use addition/subtraction of money in a real-world situation; explain and justify the results of calculations; justify and model the results of calculations involving constant rates; use number sentences to model a mathematical situation; analyze characteristics of and identify 3-D figures, quadrilaterals, and angle measures; use a coordinate grid to describe paths and determine distances between points; convert between standard units of measurement.

MAP score range: 706–830.

Mathematics, Abbreviated Achievement-Level Descriptors

Grade 6

Below Basic

Students compare and order integers, positive rational numbers, and percents; describe patterns in tables and pictures; identify properties of 2-D and 3-D shapes; identify acute, obtuse, or right angles; identify transformations of 2-D shapes; identify equivalent algebraic expressions using the associative property; read and interpret line and circle graphs.

MAP score range: 495–627.

Basic

Students generate equivalent forms of percents, fractions and decimals; determine a rule for a geometric or numeric pattern; use coordinate geometry to construct and identify 2-D shapes using ordered pairs; use models to compare and explain probabilities; estimate and interpret data in graphs.

MAP score range: 628–680.

Proficient

Students add/subtract positive rational numbers; identify least common multiple and greatest common factor; estimate quotients; determine rate of increase; analyze rates of change; use variables; compare spatial views of 3-D objects; construct polygons; describe transformations; determine area of rectangles; measure angles; convert within a system of measure; interpret and complete a table based on probability; compare/explain data; calculate measures of center.

MAP score range: 681–720.

Advanced

Students estimate and convert measurements; describe solutions to algebraic equations; recognize similarities between 2-D shapes; use properties of basic figures to draw conclusions about angle size; determine area of triangles; solve elapsed time problems; apply formula for perimeter; estimate area of a figure using a coordinate grid; interpret stem-and-leaf plots; determine appropriate data collection methods and questions; interpret data to solve problems.

MAP score range: 721–845.

Grade 7

Below Basic

Students place integers on a number line; identify shapes from a group of 2-D shapes based on a common property; transform 2-D shapes; analyze precision and accuracy using measurement tools; identify unit of measure for volume; interpret bar graphs; use representations of data from bar graphs, circle graphs, stem-and-leaf plots, and box-and-whisker plots; predict outcomes using probability.

MAP score range: 510–639.

Basic

Students multiply and divide positive rational numbers; identify bases and exponents of numbers in exponential form; recognize equivalent numerical representations; solve 2-step problems; use variables to solve inequalities and equations; analyze patterns represented numerically or graphically; read and interpret graphs.

MAP score range: 640–684.

Proficient

Students read/write numbers up to hundred-millions place; compare integers, rational numbers, percents; perform operations with mixed numbers; use circle graphs to recognize relationship of parts to whole; solve fraction/decimal/percent problems; solve proportion/scale problems; use models to solve problems; model with equations; describe and classify 2-D/3-D shapes; apply spatial reasoning to estimate area; solve time problems; solve area problems; calculate measures of center.

MAP score range: 685–723.

Advanced

Students calculate totals involving percents in multi-step problems; extend non-linear patterns; model with inequalities; apply the relationship of corresponding and similar angles; use scale factors on a grid to dilate shapes; describe corresponding angles and sides of similar polygons; solve problems using time conversions; find circumference and area of circles; make conversions using proportions.

MAP score range: 724–860.

Grade 8

Below Basic

Students generalize numeric patterns; generalize relationships between attributes of 2-D shapes; identify the results of subdividing 3-D shapes; identify 3-D figures using a 2-D representation; solve problems involving area; use scales to estimate distance; interpret graphs; find the mean value of a data set; select graphical representations of data; interpret data; make conjectures based on theoretical probability.

MAP score range: 525–669.

Basic

Students perform operations with rational numbers; solve and interpret one-step linear equations; extend geometric patterns; generalize patterns to find a specific term; identify relationships in 3-D objects; calculate the theoretical probability of an event; interpret a scatter plot to determine the relationship between two variables.

MAP score range: 670–709.

Proficient

Students identify equivalent representations of a number; identify mental strategies to solve problems; solve multi-step equations; use symbolic algebra; identify transformations; classify angles; create similar polygons; use coordinate geometry; solve problems involving area; identify appropriate units of measure; convert standard units within a system of measurement; interpret graphic organizers; calculate measures of center.

MAP score range: 710–740.

Advanced

Students estimate the value of square roots; write numbers using scientific notation; solve two-step inequalities; analyze slope and intercept in linear equations; apply the Pythagorean Theorem using coordinate geometry; identify polygons based on their attributes; identify coordinates of vertices of a transformed polygon; use a protractor to measure angles; solve problems involving surface area; select, create, and use appropriate graphical representation of data.

MAP score range: 741–885.

Science, Abbreviated Achievement-Level Descriptors

Grade 5

Below Basic

Students identify the relationship between mass and force; classify bodies of water; identify weather instruments and their uses; identify characteristics of the solar system; compare amounts/measurements given in a simple format; identify appropriate tools for simple scientific measurements; identify how technological advances may be helpful to humans.

MAP score range: 470–625.

Basic

Students explain the relationship between mass and force; describe how specialized body structures help animals survive; match environments to the plants and animals they support; identify environmental problems and find solutions; determine the appropriate scientific tool and its function in an investigation; determine how technological advances address problems and enhance life.

MAP score range: 626–668.

Proficient

Students describe changes in properties of matter; identify uses of simple machines; explain how work is done; identify forces of magnetism; describe the motion of objects; identify plant parts and their functions; classify vertebrates and invertebrates; classify producers, consumers, or decomposers; predict changes in food chains; identify the effects of human activities on other organisms; describe the Sun as a source of light and heat, or the moon as a reflector of light; explain the day/night cycle; interpret data; distinguish between man-made and natural objects; apply problem solving skills to a situation.

MAP score range: 669–691.

Advanced

Students identify energy transformations; predict the effect of heat energy on water; diagram a complete electrical circuit; predict how simple machines affect the force needed to do work; describe the effects of weathering and erosion on Earth's surface; describe relationships in weather data; explain how the Sun's position and the length and position of shadows relate to the time of day; interpret and apply knowledge from a data table; identify appropriate steps and tools in an investigation.

MAP score range: 692–855.

Grade 8

Below Basic

Students identify simple terms related to matter and energy; demonstrate beginning understanding of properties of light and how it travels; identify structures of plants and animals needed for survival; identify levels of organization in multicellular organisms; read simple graphs and make simple data comparisons.

MAP score range: 540–670.

Basic

Students identify an example of a force; demonstrate simple understanding of how traits are passed from one generation to the next; have a basic understanding of climate; identify a simple hypothesis; recognize a trend in a data table; demonstrate some awareness of how various factors influence and are influenced by science and technology.

MAP score range: 671–702.

Proficient

Students classify types of motion; calculate the speed of an object; demonstrate simple understanding of life processes; classify and/or show relationships between organisms; explain how adaptations help organisms survive; explain how species are affected by environmental change; understand and describe a food web; explain rock and fossil evidence of changes in the Earth; explain how Earth's systems interact; draw conclusions from tables or graphs; demonstrate basic understanding of the solar system; recognize the need for, and calculate, averages; use appropriate tools and methods to collect data; describe tools and discoveries that advance scientific knowledge.

MAP score range: 703–734.

Advanced

Students explain the physical and chemical properties of matter; apply knowledge of energy and energy transfer; demonstrate understanding of physical and chemical processes of organisms; evaluate the effects of balanced and unbalanced forces; predict the impact of environmental change in ecosystems; justify how adaptations help organisms survive; demonstrate understanding of the water cycle; compare and contrast weather and climate; explain the cause of seasons on Earth; demonstrate understanding of the solar system; apply the concept of light years; apply awareness of the influence of science and technology in society.

MAP score range: 735–895.

Sample Reports

Individual Student Report

The Individual Student Report provides information about performance on the MAP, describing results in terms of four levels of achievement in a content area. It may be used for instructional planning, as a point of reference during a parent/teacher conference, and for permanent record keeping. Other sources of information, such as classroom performance, should be used along with this report when determining the student's areas of strength or need.

Achievement-level scores describe what students can do in terms of the content and skills assessed by the MAP. Teachers, students, and parents/guardians can use this information in addition to how the student performs in the classroom to determine what skills and abilities need to be acquired to enable the student to progress to higher achievement levels. A student in the Proficient or Advanced level has met the standard. Students in the Below Basic and Basic levels have typically mastered skills described for their levels on pages 5–9, but need to work on skills in higher levels.

Ⓐ Student Report for:
This area of the report is reserved for the name and biographical data of the student taking the assessment.

Ⓑ How did your child perform in Communication Arts?
This is your child's scale score. The scale score is also printed in the left column under "Overview of Performance," along with the average score achieved by students statewide (State Mean Score).

Ⓒ Your child's achievement level is Basic.
Achievement levels (whether Advanced, Proficient, Basic, or Below Basic) are based on the test score ranges listed beneath each Achievement Level shown in the center column.

Ⓓ Overview of Performance
The **Scale Score** is derived from student responses to assessment items. It summarizes the overall level of performance attained by your child for a particular content area.

The **State Mean Score** is the average score of the students taking the assessment in the state.

The ***TerraNova* National Percentile (NP) Score** is a nationally norm-referenced score that compares the student with a normative sample of students in the nation. In this example, the student has an NP score of 41, which means this student scored better than 41 percent of the students in the nation who took the *TerraNova* test.

Ⓔ What you can do at home to help your child.
Activities suggested in this section of the report (in the right column) can help students improve their performance in the content area. The recommended activities can assist parents with improving and enriching their child's skills based on his or her achievement level.

Missouri Grade-Level Assessment Program

2013 Individual Student Report

A Student Report for:

Name PEGGY WEBBER

Student ID 0123456789
Birthdate MM/DD/YYYY
Grade 8
School SALEM MIDDLE SCHOOL FOR GIRLS
District CREAKLE CENTRAL SCHOOL DISTRICT

D Overview of Performance

Scale Score: 639
This report provides information about achievement on the Missouri Assessment Program (MAP).

State Mean Score: 696
The average score of the students taking the assessment in the State.

TerraNova Score: 41
Achievement on the TerraNova test is measured by National Percentile, which ranges from the lowest (1) to the highest (99) performance nationally.

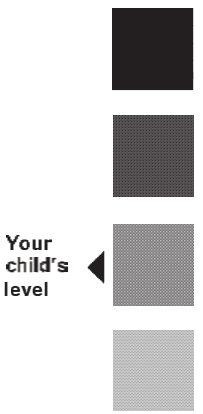
To find more learning resources, visit www.dese.mo.gov/

B How did your child perform in Communication Arts?

Your child received a score of 639.

One way to measure performance is by achievement levels, which are based on scale scores. Achievement levels describe what your child's score means.

C Your child's achievement level is Basic.



Advanced
Scores of 723 and above demonstrate a thorough understanding of the content at this grade level.

Proficient
Scores at 696-722 demonstrate an understanding of the content expected at this grade level.

Basic
Scores at 639-695 demonstrate a partial understanding of content expected at this grade level.

Below Basic
Scores of 638 and below do not demonstrate an understanding of the content expected at this grade level.

What does a level of "Basic" mean?
Reading-Students define simple vocabulary; identify main idea; draw simple conclusions; make simple inferences; recall details from text; determine reliability of resources. Writing-Students write a paragraph to a specific audience.

E What you can do at home to help your child

Here are some recommended activities to improve or enrich skills based on your child's results.

Curriculum Framework:

Gather, Analyze, and Apply Information and Ideas

Essential Question: How can we analyze the messages conveyed in the media to help make decisions?

Engage your child in a dialogue to distinguish fact from opinion while you are both watching a TV commercial, reading a magazine advertisement, looking at billboards while in the car, or when you see another type of advertisement. Ask your child what message the ad is sending and what action the advertiser is trying to get you to take. Discuss where actual facts are being used and where the ad is using information that can't be proven. As an example, you and your child can compare a public service announcement on TV discussing the health risks of smoking (which is factual) with a magazine advertisement about sneakers that make you run faster (which may be an exaggeration to sell the product). Ask your child to create an advertisement that is based only on facts.

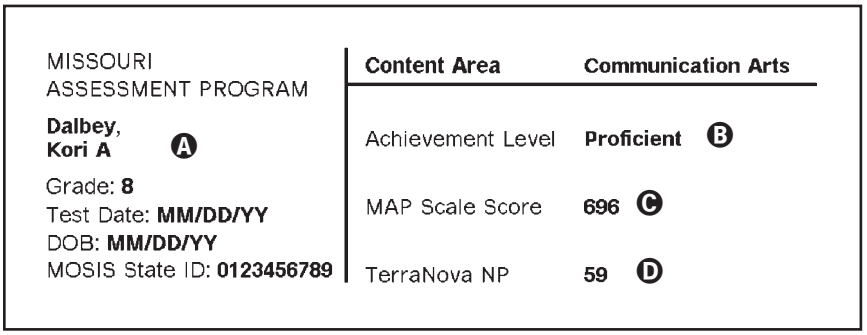
A single exam can provide only limited information. You should confirm your child's strengths and needs in these topics by reviewing classroom work, standards-based assessments, and your child's progress reports during the year.

For more resources, go to
www.dese.mo.gov/divimprove/curriculum/GLE/CAgle.html
www.dese.mo.gov/divimprove/assess/

CTBID: 000000000000000-00-00000-000000

CTB McGraw-Hill

Student Label



Above is a sample of the MAP student label. The student label is designed so that each student's test results can be placed in the student's permanent record. A label is provided for every student who participated in the Spring 2013 administration of the MAP. Each label has a self-adhesive backing so that it can be peeled from the sheet and placed in the student's cumulative school record. The label presents a snapshot of the student's results on the MAP. Separate labels are generated for each grade and content area; thus, a student will have multiple labels for each of the content areas administered within a grade.

A The left side of the label lists the name and biographical data of the student taking the assessment.

B This is the student's Achievement Level (Advanced, Proficient, Basic, or Below Basic).

C This is the student's Scale Score for the content area listed at the top of the label.

D This is the student's *TerraNova* National Percentile (NP) Score.

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20 Ryan Ranch Road
Monterey, CA 93940-5703