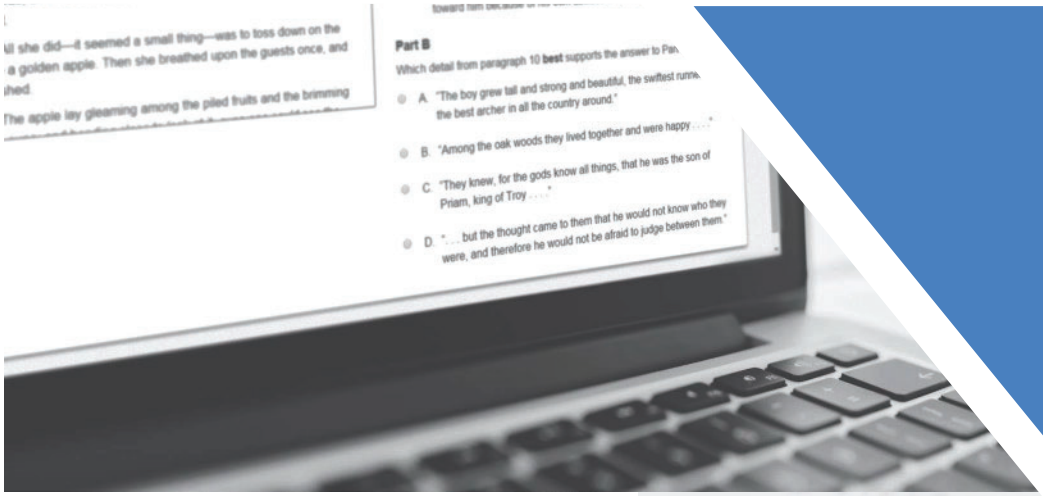
Spring 2026

Maryland
STATE DEPARTMENT OF EDUCATION



MCAP Science (MISA) Score Interpretation Guide for Parents/Caregivers

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1.0 General Information for Parents/Caregivers and Educators

1.1 Background

The Maryland Comprehensive Assessment Program (MCAP) will provide students, parents/caregivers, educators and the community with better student information at a faster pace. The goal is to gather information that helps Maryland schools strengthen our instruction and improve student performance so that our graduates are ready to move into the workforce or a postsecondary institution.

1.2 MCAP Science (MISA) Assessments

The primary purpose of MCAP is to provide high-quality assessments to measure students' progress toward college and career readiness.

The MCAP Science (MISA) assessments were administered in either computer-based or paper-based format. The tests assessed student mastery of the three dimensions necessary to understand science: Disciplinary Core Ideas (DCI), Science and Engineering Practices (SEP), and Crosscutting Concepts (CCC). Students demonstrated their mastery by interacting with a stimulus such as a video, chart, or diagram, and then responding to several items supported by the stimulus.

1.3 Confidentiality of Reporting Results

Individual student performance results on the MCAP are confidential and may be released only in accordance with the Family Educational Rights and Privacy Act of 1974 (20 U.S.C. Section 1232g). Aggregated student performance data are made available to the public and do not contain the names of individual students or teachers.

1.4 Purpose of this Guide

This guide provides information on the individual student reports that will help parents/caregivers understand their student's test results.

Sample reports included in this guide are for illustration purposes only. They are provided to show the basic layout of the reports and the information they provide. Sample reports do not include actual data from any test administration.

2.0 Understanding the MCAP Individual Student Report (ISR)

2.1 Types of Scores on the MCAP ISR

Student performance on the MCAP Science assessment is described on the individual student report using scale scores, performance levels, and subclaim performance indicators. State, Local Education Agency (LEA) and school average results are included in relevant sections of the report to help parents/caregivers understand how their student's performance compares to that of other students. In some instances, a note will appear in place of average results for a school and/or LEA. This indicates that there are too few students to maintain student privacy and therefore results are not reported.

2.1.1 Scale Score

A scale score is a numerical value that summarizes student performance. Not all students respond to the same set of test items, so each student's raw score (actual points earned on test items) is adjusted for the slight differences in difficulty among the various forms and administrations of the test. The resulting scale score allows for an accurate comparison across test forms and administration years within a grade. For example, a student who earns an overall scale score of 750 on one form of the grade 5 science assessment would be expected to earn an overall score of 750 on any other form of the grade 5 science assessment. Furthermore, the student's overall scale score and level of mastery of concepts and skills would be comparable to a student who took the same assessment the previous year or the following year.

2.1.2 Performance Level

Each performance level is a broad, categorical level defined by a student's overall scale score and is used to report overall student performance by describing how well students met the expectations for their grade level/course. Each performance level is defined by a range of overall scale scores for the assessment. There are four performance levels for the MCAP:

- Level 4: Distinguished Learner
- Level 3: Proficient Learner
- Level 2: Developing Learner
- Level 1: Beginning Learner

Students performing at levels 3 and 4 have demonstrated readiness for the next grade level/course, and ultimately, are likely on track for college and careers.

2.1.3 Dimensions of Science Performance Indicators

Mastery of the dimensions of science is reported using graphical representations which indicate how the student performed relative to the overall performance of students who were proficient or developing learners for the content area.

Performance is reported using categories rather than scale scores or performance levels. The three categories are: Distinguished or Proficient Learners, Developing Learners, and Beginning Learners.

2.1.4 Sample of Science (MISA) ISR

Maryland Comprehensive Assessment Program

A

FIRSTNAME001 K. LASTNAME001

Date of Birth: 09/02/2012 ID: 5000000041 **Grade: 5**
Local Education Agency (LEA): PV E2E SCORING DST1
PV E2E SCORING DST1_SCH1
MARYLAND
SPRING 2026

GRADE 5 MISA

B

Science Assessment Report, 2025-2026

This report shows the level of proficiency attained by FIRSTNAME001 on the MCAP Assessment. The results from this summative assessment reflect a snapshot of your student's progress towards meeting the Next Generation Science Standards (NGSS). These results should be used with school and district level assessments to gauge your student's progress towards proficiency in science.

How Can You Use This Report?

C

Ask your student's teachers:

- What do you see as my student's academic strengths and areas for improvement?
- How will you use these test results to provide remediation or enrichment to my student during this academic year?
- How can I work with my student to support your efforts in improving my student's academic performance?

5

MCAP Resources

For practice tests and additional resources pertaining to the MCAP Science Assessments, please visit https://marylandpublicschools.org/about/pages/daait/assessment/misa/index.aspx

How Did FIRSTNAME001 Perform Overall?

Performance Level 2

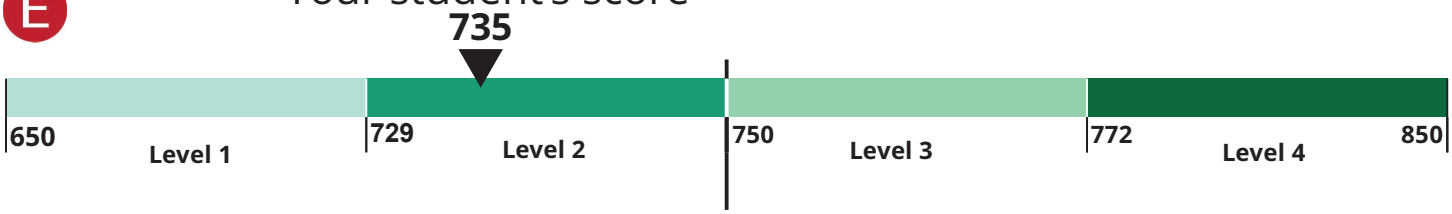
D

A description of the Performance Levels can be found on the back of this page.

- **Level 4** Distinguished Learner
- **Level 3** Proficient Learner
- **Level 2** Developing Learner
- **Level 1** Beginning Learner

E

Your student's score



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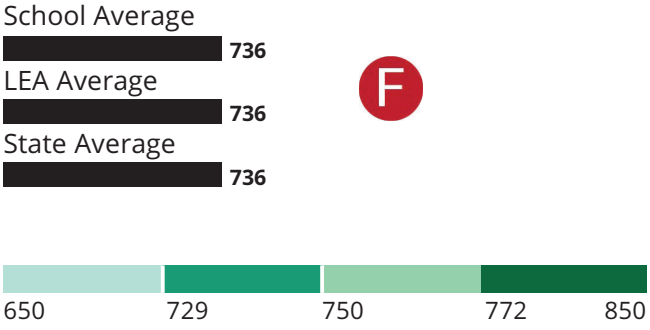
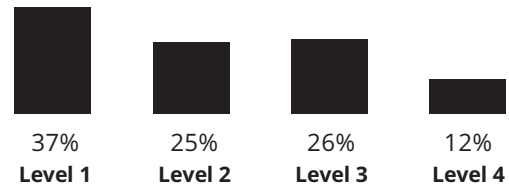


How Students in Maryland Performed

G



Percent of students at each performance level

C

How are assessment results used?

The charts above allow you to compare your student's level of performance to other students who took the same assessment across the school, district, and state during the Spring administration.

How Did Your Student Perform on the MISA?

H

Physical Sciences

Your student performed about the same as other **Proficient or Distinguished Learners.** Students demonstrate proficiency by exhibiting an understanding of matter and its interactions, motion and stability, forces and interaction, energy, waves and their applications in technologies for information transfer.

Earth and Space Sciences

Your student performed about the same as other **Developing Learners.** Students demonstrate proficiency by exhibiting an understanding of Earth's place in the universe, Earth's systems, and Earth and human activity.

Life Science

Your student performed about the same as other **Developing Learners.** Students demonstrate proficiency by exhibiting an understanding of how the structures and processes function from molecules to organisms, the interactions, energy, and dynamics of ecosystems, the inheritance and variation of traits in heredity, and the unity and diversity of biological evolution.

Investigating Practices

Your student performed about the same as students who are **Beginning Learners**. Students meet expectations by asking questions and conducting experiments.

Sensemaking Practices

Your student performed about the same as students who are **Proficient or Distinguished Learners**. Students meet expectations by analyzing data for patterns and relationships.

Critiquing Practices

Your student performed about the same as students who are **Proficient or Distinguished Learners.** Students meet expectations by evaluating and arguing about different explanations and models.

LEGEND

Your student performed about the same as:

Distinguished or Proficient Learners **Developing Learners** **Beginning Learners**

I

J

Science Performance Level Descriptions

Level 4 Distinguished Learners: *Distinguished learners demonstrate advanced proficiency* in applying scientific thinking to understand the natural world and apply engineering design to find solutions to problems. Learners at this level *think critically* about the effects of chemical reactions, forces, and energy on the world around them; the ways different organisms and the environment interact; the ways the geosphere, biosphere, and hydrosphere interact; and how engineering design can be a regular part of problem solving. Distinguished learners *are well prepared* in asking questions that lead to explanations supported by evidence, using Mathematics to analyze data, and applying scientific ideas to develop, test, compare, and improve design solutions.

Level 3 Proficient Learners: *Proficient learners demonstrate proficiency* in applying scientific thinking to understand the natural world and apply engineering design to find solutions to problems. Learners at this level *explain* the effects of chemical reactions, forces, and energy on the world around them; the ways different organisms and the environment interact; the ways the geosphere, biosphere, and hydrosphere interact; and how engineering design can be a regular part of problem solving. Proficient learners *are prepared* in asking questions that can lead to reasonable predictions, using Mathematics to describe data, and applying scientific ideas to evaluate a design solution.

Level 2 Developing Learners: *Developing learners demonstrate partial proficiency* in applying scientific thinking to understand the natural world and apply engineering design to find solutions to problems. Learners at this level *describe* the effects of chemical reactions, forces, and energy on the world around them; the ways different organisms and the environment interact; the ways the geosphere, biosphere, and hydrosphere interact; and how engineering design can be a regular part of problem solving. Developing learners *need additional academic support* in asking questions about changes in an investigation, organizing simple data sets that reveal patterns, and identifying scientific evidence used to support a claim.

Level 1 Beginning Learners: *Beginning learners do not yet demonstrate proficiency* in applying scientific thinking to understand the natural world and engineering design to find solutions to problems. Learners at this level *identify* the effects of chemical reactions, forces, and energy on the world around them; the ways different organisms and the environment interact; the ways the geosphere, biosphere, and hydrosphere interact; and how engineering design can be a regular part of problem solving. Beginning learners *need substantial academic support* in asking questions about changes in an investigation, organizing simple data sets that reveal patterns, and identifying scientific evidence used to support a claim.

2.1.5 General Description of Individual Student Reports

A. Identification Information

An Individual Student Report lists the student's name, date of birth, state student ID, grade level when assessed, LEA name, school name, and state. The grade level when assessed is also shown in a box on the left side of the report.

B. Description of Report

The description of the report provides the grade level/course assessed, content area assessed, and assessment year. It also provides a general overview of the assessment and score report.

C. How to use the Report

This section provides guidance on how parents/caregivers can use the report to start a discussion with their student's teacher(s). It is important for parents/caregivers and educators to have regular check-ins to ensure students are learning the necessary skills to stay on track. Parents/Caregivers can use the information in the report to understand their student's strengths and needs and to work with educators to identify resources to support his or her education.

2.1.6 Overall Assessment Scores

D. Overall Scale Score and Performance Level

This section of the report provides the student's overall scale score and performance level (refer to Section 2.1). Students receive an overall scale score and based on that score, are placed in one of four performance levels, with Level 4 indicating a Distinguished Learner and Level 1 indicating a Beginning Learner.

E. Graphical Representation of Overall Performance: Overall Scale Score and Performance Level

This graphic provides an illustration of the four performance levels and where the student's overall scale score is positioned along the performance scale. The student's score is indicated by the black triangle positioned along the range of overall scale scores that define each performance level. The ranges of overall scale scores are indicated underneath the graphic. The scale scores needed to reach each performance level vary slightly between grades 5 and 8.

F. Average of School, LEA, State

The average overall scale scores of the school, LEA, and state are shown below the overall scale score and performance level graphic. This allows for comparing a student's overall scale score to the average overall scale score of students at the school, LEA, and state level for the same grade level.

G. Percentage of Students at Each Performance Level

This section provides a bar graph showing the percentage of students within the state who performed at each of the four performance levels.

2.1.7 Performance by Reporting Category

H. Dimensions of Science Reporting Categories

The report shows the student's performance for two Dimensions of Science Reporting Categories. The Disciplinary Core Idea (DCI) subclaim is separated into Physical Science, Earth and Space Science, and Life Science. The Science and Engineering Practices (SEP) subclaim is separated into Investigating Practices, Sensemaking Practices, and Critiquing Practices.

I. Dimensions of Science Reporting Categories

Student performance for each dimension is marked with a dimension performance indicator and a description of students at that performance level.

- **A completely filled in circle** for the specified dimension indicates the student as a "Distinguished Learner" or "Proficient Learner".
- **A half filled in circle** for the specified dimension indicates the student as a "Developing Learner".
- **An empty circle** for the specified dimension indicates the student as a "Beginning Learner".

J. Science Performance Level Descriptions

The report provides the performance level descriptions for the MCAP Science assessment.