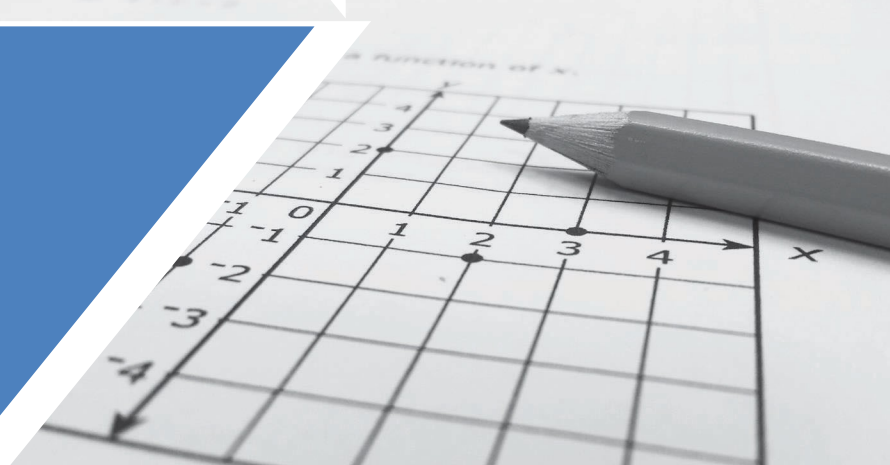
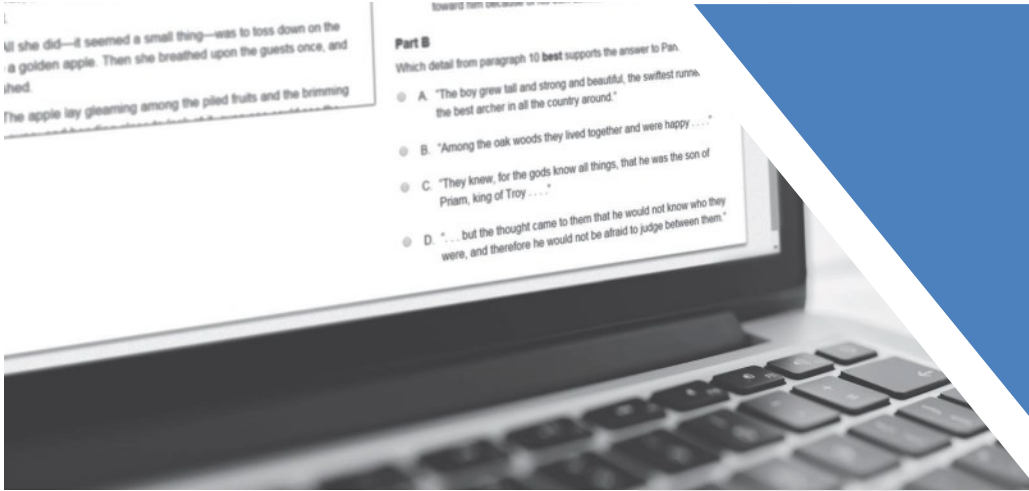


# Spring 2026



# MCAP Science (MISA) Score Interpretation Guide for Educators

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## **1.0 General Information for 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, school reports, and Local Education Agency (LEA) reports provided for MCAP results. Section 2.0 outlines and explains elements of the individual student report. Section 3.0 outlines and explains elements of the school and LEA reports.

Individual state policies and calculations for accountability reporting may differ from the policies and calculations used for assessment reports. A separate score interpretation guide is available for parents/caregivers.

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, 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. Additional information pertaining to the test performance levels can be found in Appendix A.

#### **2.1.3 Dimensions of Science Performance Indicators**

The dimensions of science are subclaims that provide additional information about student performance. Subclaim performance is represented by a graphic that identifies the student's performance category. Each category includes a description of student performance at that level.

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**



# 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?



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?

## 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**



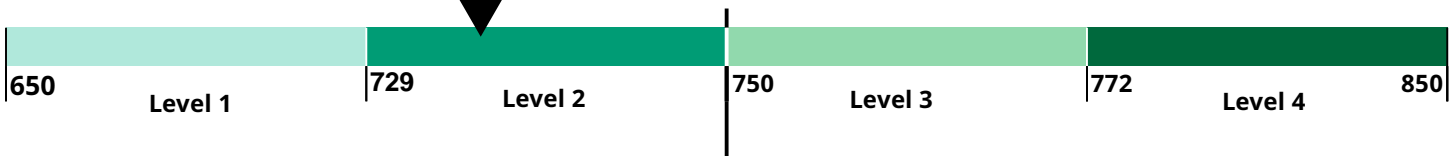
- Level 4** Distinguished Learner
- Level 3** Proficient Learner
- Level 2** Developing Learner
- Level 1** Beginning Learner

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



Your student's score

735



### School Average

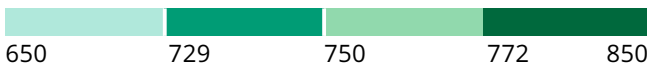
736

### LEA Average

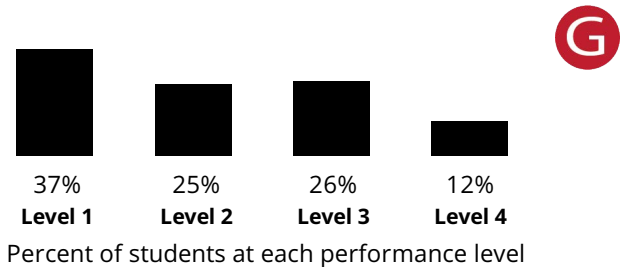
736

### State Average

736



## How Students in Maryland Performed



## 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?

### 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.

H

### 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



## 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. Refer to **Appendix A** for the full list of scale score ranges for each performance level.

### **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 the two Dimensions of Science Subclaim 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 represented by a graphic and includes a description of the student's performance in that category.

- **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.

### **3.0 Understanding the MCAP School & LEA Level Reports**

#### **3.1 Purpose and Use of MCAP Results**

The primary purpose of MCAP is to provide high-quality assessments to measure students' progress toward college and career readiness. These results are a helpful tool in evaluating educational programs and student reports by

- Summarizing student achievement
- Describing student performance relative to meeting standards
- Supporting LEA and school level improvement planning

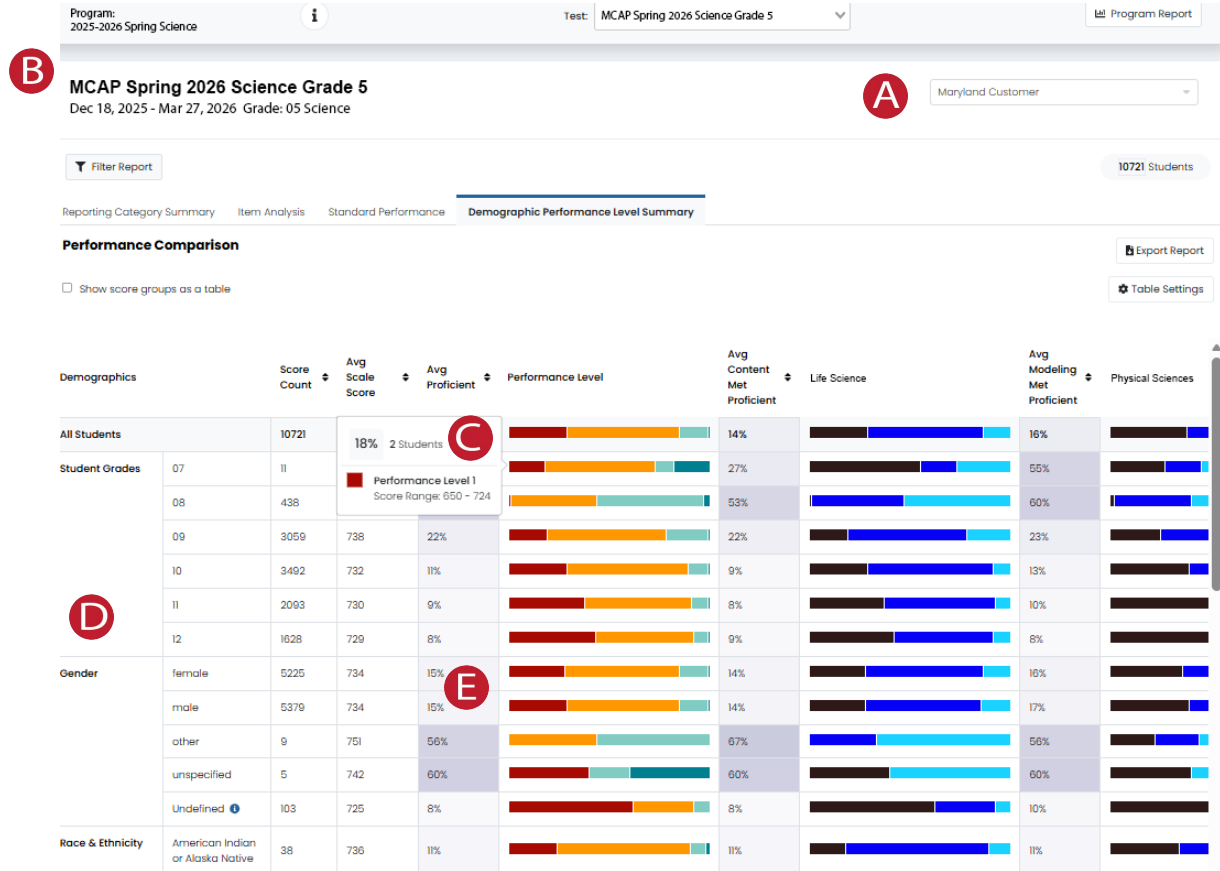
#### **3.2 MCAP School and LEA Reports**

In addition to Individual Student Reports, schools will receive a school level and LEA level Demographic Performance Level Summary and Evidence Statement Analysis.

##### **3.2.1 Understanding the Demographic Performance Level Summary (DPLS)**

Demographic Performance Level Summary reports are provided at the School and LEA Level. This report breaks out the performance aggregations into subcategory levels. In some instances, the overall performance will show as “Data suppressed to protect student privacy” in place of 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.

### 3.2.2 Sample of the Demographic Performance Level Summary



### 3.2.3 Description of the Demographic Performance Level Summary

#### A. Identification Information

The report identifies the LEA and School name.

#### B. Description of Report

The content area of the report, the grade of the assessment, and the administration year are identified.

#### C. Performance Level Key

The report displays performance levels in ADAM, enabling users to view the level number and the Percentage of students within each demographic category by hovering over the bars.

#### D. Demographic, Program Categories, and Number of Valid Scores

The demographic and program categories with student groups are listed on the left side of the table. Reporting categories includes: Student Grades, Gender, Race & Ethnicity, Economic Disadvantage, IEP, Limited English Proficiency and Section 504. The number of valid scores appears below the demographic or program category. This includes students with a valid score. Students with no score or who were deleted from ADAM are not included.

#### E. Performance Level Results

The percentage of students who performed at the Distinguished Learner, Proficient Learner, Developing Learner, and Beginning Learner are displayed for each demographic or program student group.

### 3.2.4 Understanding the Evidence Statement Analysis

The Evidence Statement Analysis Report is a two-page report that analyzes the performance of the Science evidence statements represented by items on the Science (MISA) assessment. Page 1 of the Evidence Statement Analysis shows the performance by evidence statement in graph form. Page 2 of the Evidence Statement Analysis links the MCAP Science evidence statements to the Next Generation Science Standards upon which they are based.

### 3.2.5 Sample of the Evidence Statement Analysis



## School Evidence Statement Analysis

Grade 5

CONFIDENTIAL - DO NOT DISTRIBUTE

**A**

SAMPLE SCHOOL NAME  
SAMPLE LSS NAME  
MARYLAND  
SPRING 2026

**B**

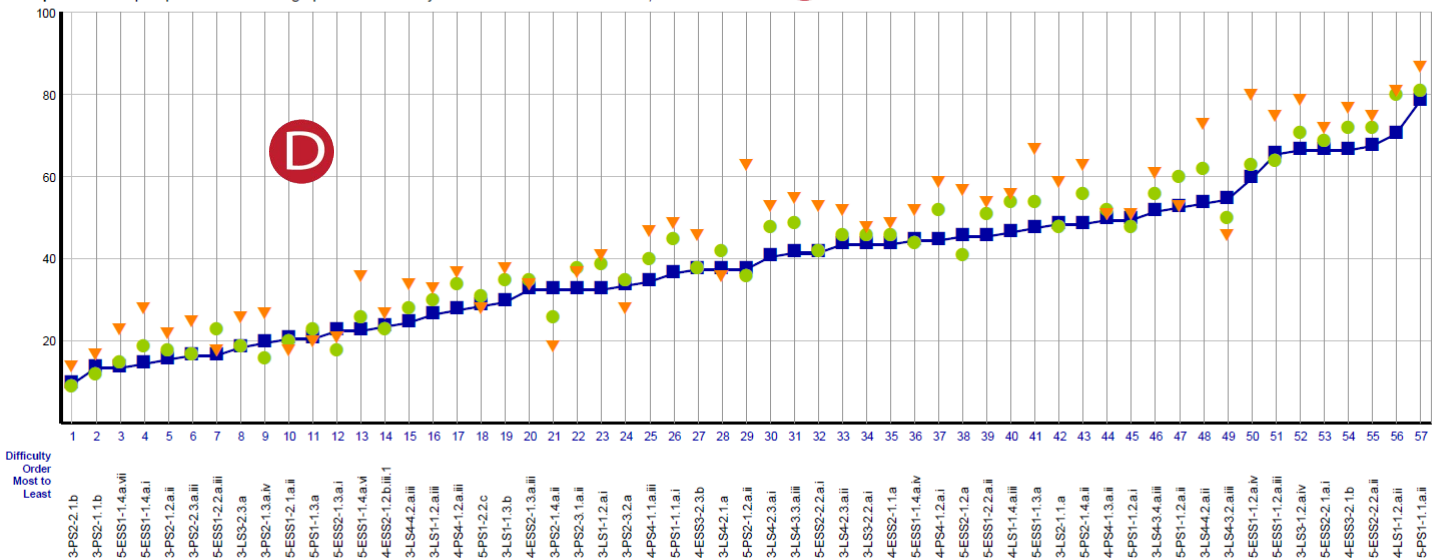
SCIENCE  
Grade 5 MISA, 2025–2026

■ State  
● LEA  
▼ School

Students with Valid Scores (137)

Purpose: This report presents the average percent correct by Evidence Statement for school, LEA and state.

**C**



**D**

Difficulty Order Most to Least

Difficulty level is determined at the State level for all reports.  
Evidence Statements not tested in LEA or school are left blank.

Evidence Statement

**E**

This report is NOT for public review. Distribution within your school/LEA must be in accordance with state and federal privacy laws, and local school board policy.  
Page 1

01222026-Sp-Z9999999-33-4444-0000000

This report shows the operational Evidence Statements for the given grade and subject sorted by difficulty.

## SCIENCE

### Grade 5 MISA, 2025–2026

Difficulty Order Most to Least	NGSS Performance Expectation	Evidence Statement	Dimensions		School Student Count
			Science and Engineering Practices (SEP)	Disciplinary Core Ideas (DCI)	
1	5-ESS1-1	5-ESS1-1.4.a.i	Critiquing Practices	Earth and Space Science	11
2	5-PS1-2	5-PS1-2.2.d	Investigating Practices	Physical Science	60
3	5-ESS1-1	5-ESS1-1.4.a.vi	Critiquing Practices	Earth and Space Science	11
4	5-ESS2-1	5-ESS2-1.3.a.i	Sensemaking Practices	Earth and Space Science	11
5	3-LS3-2	3-LS3-2.3.a	Sensemaking Practices	Life Science	11
6	3-LS4-3	3-LS4-3.2.a.ii	Critiquing Practices	Life Science	26
7	5-LS2-1	5-LS2-1.1.a.iv	Sensemaking Practices	Life Science	11
8	5-PS2-1	5-PS2-1.2.a.i	Critiquing Practices	Physical Science	11
9	4-PS4-3	4-PS4-3.3.b	Sensemaking Practices	Physical Science	23
10	3-LS4-4	3-LS4-4.2.a.v	Critiquing Practices	Life Science	23
11	3-ESS3-1	3-ESS3-1.3.a.ii	Critiquing Practices	Earth and Space Science	26
12	3-PS2-3	3-PS2-3.1.a.ii	Investigating Practices	Physical Science	11
13	5-PS1-4	5-PS1-4.3.a.iii	Investigating Practices	Physical Science	60
14	5-PS1-4	5-PS1-4.3.a.iv	Investigating Practices	Physical Science	60
15	3-LS4-2	3-LS4-2.3.a.ii	Sensemaking Practices	Life Science	11
16	4-ESS3-1	4-ESS3-1.1.a.i	Critiquing Practices	Earth and Space Science	26
17	5-ESS3-1	5-ESS3-1.2.a.ii	Critiquing Practices	Earth and Space Science	26
18	5-PS1-4	5-PS1-4.3.a.i	Investigating Practices	Physical Science	49
19	5-PS2-1	5-PS2-1.2.a.ii	Critiquing Practices	Physical Science	11
20	5-LS2-1	5-LS2-1.3.a.i	Sensemaking Practices	Life Science	11
21	3-PS2-3	3-PS2-3.2.a	Investigating Practices	Physical Science	11
22	5-LS2-1	5-LS2-1.2.a.i.4	Sensemaking Practices	Life Science	11
23	5-PS1-4	5-PS1-4.1.b	Investigating Practices	Physical Science	11
24	5-LS1-1	5-LS1-1.4.a.v	Critiquing Practices	Life Science	11
25	5-ESS2-1	5-ESS2-1.2.a	Sensemaking Practices	Earth and Space Science	11
26	3-LS4-4	3-LS4-4.3.b	Critiquing Practices	Life Science	23
27	4-ESS2-1	4-ESS2-1.4.a	Investigating Practices	Earth and Space Science	26
28	3-LS4-2	3-LS4-2.1.a	Sensemaking Practices	Life Science	11
29	3-LS3-2	3-LS3-2.1.a	Sensemaking Practices	Life Science	11
30	3-LS4-2	3-LS4-2.3.a.iii	Sensemaking Practices	Life Science	26
31	5-PS2-1	5-PS2-1.4.a.ii	Critiquing Practices	Physical Science	11
32	5-LS2-1	5-LS2-1.2.a.ii	Sensemaking Practices	Life Science	11
33	4-ESS1-1	4-ESS1-1.1.b	Sensemaking Practices	Earth and Space Science	23
34	3-LS4-2	3-LS4-2.3.a.i	Sensemaking Practices	Life Science	11
35	5-ESS1-2	5-ESS1-2.2.a.ii	Sensemaking Practices	Earth and Space Science	23
36	5-ESS1-1	5-ESS1-1.3.a	Critiquing Practices	Earth and Space Science	11
37	4-PS4-1	4-PS4-1.2.a.iii	Sensemaking Practices	Physical Science	26
38	5-ESS2-2	5-ESS2-2.2.a.i	Investigating Practices	Earth and Space Science	11
39	3-LS4-3	3-LS4-3.2.a.iii	Critiquing Practices	Life Science	26
40	5-ESS1-2	5-ESS1-2.2.b.i	Sensemaking Practices	Earth and Space Science	23

continued

NGSS Evidence Statements: <https://nextgenscience.org/evidence-statements>

Maryland Science Program: <https://marylandpublicschools.org/about/Pages/DCAA/Science/index.aspx>

This report is NOT for public review. Distribution within your school/LEA must be in accordance with state and federal privacy laws and local school board policy.

### **3.2.6 Description of the Evidence Statement Analysis**

#### **A. Identification Information**

The report identifies the LEA and School name.

#### **B. Description of Report**

The content area of the report, the grade of the assessment, and the administration year are identified.

#### **C. Students with Valid Scores**

The number of valid scores includes students with a valid score. Students with no score or who were deleted from ADAM are not included.

#### **D. Graph**

The average percent correct by each cluster of items, combined at an evidence statement level is represented on the chart at a state level, LEA level, and school level. A legend is provided to show which lines represent each level shown. State symbols are connected with a solid line. LEA and school symbols are not connected because depending on the form assignment selection taken at the school or LEA all evidence statements may not be represented. If an evidence statement is not represented at a school or LEA level, there will not be a symbol on the chart for that evidence statement listed. If a symbol is on the chart at zero percent this indicates the evidence statement group had 0% achieved out of the maximum points possible for that school or LEA.

#### **E. Performance Level Results**

The Science items are written to Science Evidence Statements, which are based on the Next Generation Science Standards (NGSS). Each operational item on the assessment is aligned with a single evidence statement. In some instances, a single evidence statement could be used for multiple items.

Evidence statements where the state average points achieved versus the maximum points possible were lower are considered more difficult. The evidence statements are placed in order on the graph from most to least difficult. This difficulty order is determined by analyzing the overall performance at the state level.

#### **F. Legend**

The legend for this graph provides a symbol for State, LEA, and School values.

#### **G. Next Generation Science Standards (NGSS)**

The Next Generation Science Standards linked to the MCAP Science Evidence Statement are listed in the second column.

#### **H. Evidence Statement**

The Evidence Statements are listed in the same order as on the bottom of page one, from most to least difficult.

#### **I. Dimensions**

The NGSS dimensions of science identify the science and engineering practice category and disciplinary core idea that the evidence statement is aligned to.

#### **J. School Student Count**

The student count represents the number of students whose form of the assessment contained an item or items written to the evidence statement listed in column B. The count may differ by row because there are different forms of the assessment and not all forms include all items or evidence statements.

#### **K. Additional Information**

The links to more detailed information on the MCAP Science Evidence Statements, the NGSS website, and the Maryland Science Standards are provided at the bottom of the report.

# **Appendix A**

## **Scale Score Ranges**

Grade 5 Science		
Performance Level 4	Distinguished Learner	772-850
Performance Level 3	Proficient Learner	750-771
Performance Level 2	Developing Learner	729-749
Performance Level 1	Beginning Learner	650-728

Grade 8 Science		
Performance Level 4	Distinguished Learner	773-850
Performance Level 3	Proficient Learner	750-772
Performance Level 2	Developing Learner	726-749
Performance Level 1	Beginning Learner	650-725