

8.0 Item Analysis Report

8.1 Description of Item Analysis Report – CMAS Science

An Item Analysis Report is available at the school and district level for CMAS science for each assessed grade level and content area. The report includes item level score information at the school, district, and state levels. The back of the report includes item map information.

Information included on the Item Analysis Report can be used to identify patterns of items (and aligned CAS) where a school is performing better or worse than the district or state or where a district is performing better or worse than the state. For example, within a particular Grade Level Expectation (GLE), a school within a district may be out-performing the district and the state while the school may be performing worse than the district and the state in another GLE. In combination with other evidence and data, schools and districts can use the information in the Item Analysis Report to identify patterns across standards, GLEs, and PGCs that may be indicative of potential areas of strength or weakness. A sample Item Analysis Report is in Section 8.2.

8.1.1 General Information

Refer to page 1 of the Item Analysis Report.

A. Test Date

The administration season and year.

B. Identification Information

The school and district name and code.

C. Subject Area

The subject area of the report (either science or social studies).

D. Grade

The grade level of the assessment.

8.1.2 Item Analysis Information

Refer to page 1 of the Item Analysis Report.

E. Number of Students with Valid Scores

Reportable or valid scores are records that met attemptedness, are non-voided, and are without suppression codes that excluded them from aggregations (e.g., expelled and home-schooled students or when a misadministration or irregularity occurred during testing). The number of valid scores does not include students with “no score” on the assessment.

F. Graph Key

Explanatory text for the symbols and lines in the graph: state and district for the district level report and state, district, and school for the school level report.

G. Average Percent of Points Earned

The average percent of points earned is graphed by state, district, and school to show performance by item in order from most to least difficult. Items that were more difficult for students across the

state have a lower average percent of points earned. For 1-point selected response items, the percent of students who correctly responded is recorded. For 2- and 3-point constructed response items, the average of points earned is divided by 2 or 3, respectively, in creating the percentage.

H. Numbered Items

Items are identified by numbers in blue text at the bottom of the graph and are ordered from most difficult to least difficult based on the state level, such that the most difficult item is labeled as 1.

I. Standard and Grade Level Expectation (GLE)/Prepared Graduate Competency (PGC)

On elementary and middle school item analysis reports, the corresponding standard and GLE are listed below each item. On the high school item analysis report, the corresponding standard and PGC are listed below each item.

J. Graphical Representation of State, District, and School Level Performance by Item

The graphical representation shows how the state, district, and school performed on each operational item. The state is represented as a blue line with squares, the district is represented as a green line with circles, and the school is represented by an orange line with triangles.

K. Document Process Number

A number unique to each administration, found in the bottom-right corner of the report, assigned by the testing contractor.

8.1.3 Item Map Information

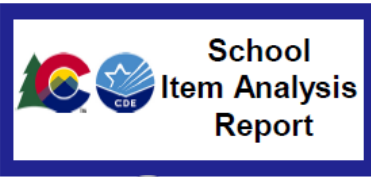
Refer to page 2 of the Item Analysis Report.

L. Item Map Information

Page 2 of the Item Analysis Report includes information for all the operational items included on the assessment. Items are ordered from most to least difficult, as they were on page 1 of the report. For each item, the following information is included:

- Difficulty order from most to least (matches page 1)
- Standard and GLE numbers (for grades 4, 5, 7, and 8 only — high school has Standard and PGC number)
- Location on the test (unit number and item number)
- Standard by name
- Prepared Graduate Competency (PGC)
- Grade Level Expectation (GLE) (elementary and middle school only)
- Item type (Selected Response (SR); 2-point Constructed Response (CR-2); 3-point Constructed Response (CR-3))

8.2 Sample Item Analysis Report – CMAS Science



Colorado Measures of Academic Success

A Spring 2021

School: **B** SAMPLE SCHOOL NAME (4444)
 District: SAMPLE DISTRICT NAME (5555)

C Science

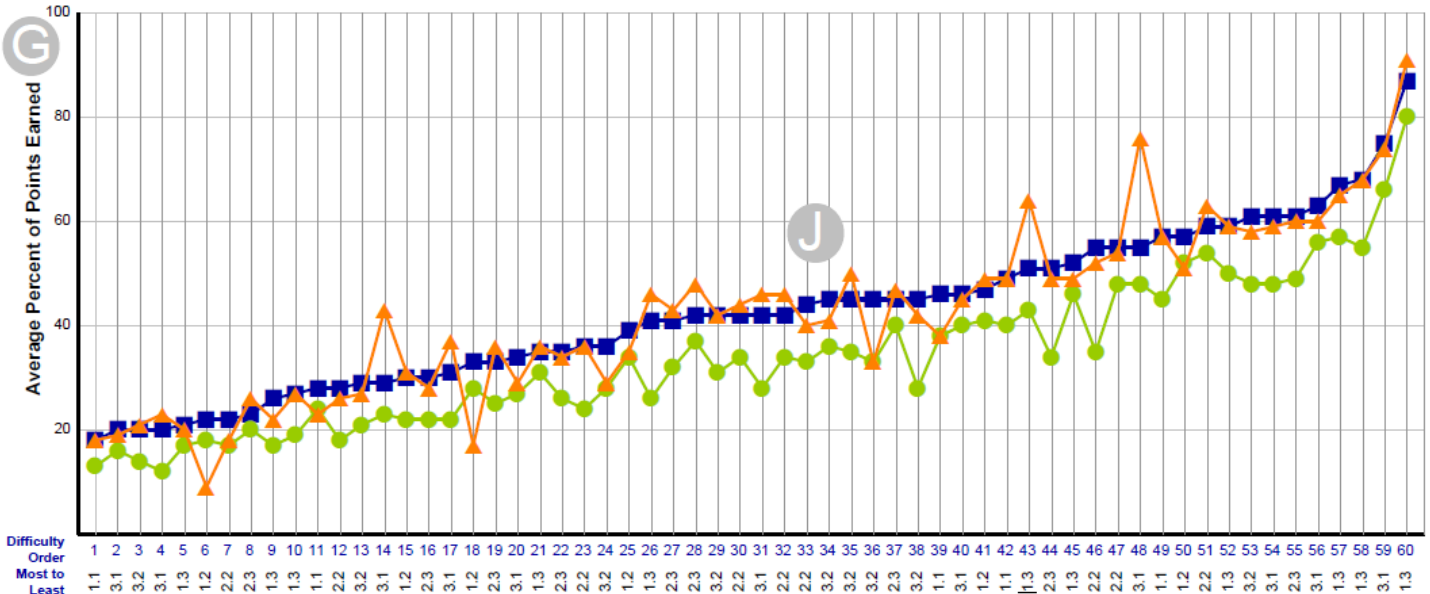
CONFIDENTIAL - DO NOT DISTRIBUTE

D Grade 8

E Purpose: This report presents the average percent of points earned by item for the school, district, and state.

F Students with Valid Scores (44)

F ■ State ● District ▲ School



Difficulty Order: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60
 Most to Least

H **I** Standard.GLE

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

**Item Analysis
Report
Detail**

Colorado Measures of Academic Success Spring 2021

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

Science **Grade 8**

CONFIDENTIAL - DO NOT DISTRIBUTE

Difficulty Order Most to Least	Standard.GLE	Unit-Item Number	Standard	Prepared Graduate Competency (PGC)	Grade Level Expectation (GLE)	Item Type Selected Response (SR) Constructed Response (CR)
1	1.1	2-012	Physical Science	PGC1	GLE1	SR
2	3.1	1-010	Earth Systems Science	PGC1	GLE4	SR
3	3.2	2-002	Earth Systems Science	PGC2	GLE2	SR
4	3.1	3-009	Earth Systems Science	PGC1	GLE4	CR-2
5	1.3	1-013	Physical Science	PGC3	GLE4	CR-3
6	1.2	2-009	Physical Science	PGC2	GLE3	CR-2
7	2.2	2-017	Life Science	PGC2	GLE1	SR
8	2.3	3-017	Life Science	PGC3	GLE2	SR
9	1.3	3-004	Physical Science	PGC3	GLE2	SR
10	1.3	1-008	Physical Science	PGC3	GLE2	CR-2
11	1.1	1-007	Physical Science	PGC1	GLE1	SR
12	2.2	2-018	Life Science	PGC2	GLE1	CR-2
13	3.2	2-010	Earth Systems Science	PGC2	GLE1	SR
14	3.1	3-008	Earth Systems Science	PGC1	GLE4	CR-2
15	1.2	3-011	Physical Science	PGC2	GLE3	SR
16	2.3	3-018	Life Science	PGC3	GLE2	CR-2
17	3.1	3-007	Earth Systems Science	PGC1	GLE4	SR
18	1.2	2-006	Physical Science	PGC2	GLE3	SR
19	2.3	2-013	Life Science	PGC3	GLE2	CR-3
20	3.1	2-015	Earth Systems Science	PGC1	GLE3	SR
21	1.3	3-012	Physical Science	PGC3	GLE4	SR
22	2.3	3-024	Life Science	PGC3	GLE2	SR
23	2.2	1-020	Life Science	PGC2	GLE1	SR
24	3.2	3-005	Earth Systems Science	PGC2	GLE1	SR
25	1.2	2-007	Physical Science	PGC2	GLE3	SR
26	1.3	2-023	Physical Science	PGC3	GLE4	SR
27	2.3	3-019	Life Science	PGC3	GLE2	CR-2
28	2.3	2-001	Life Science	PGC3	GLE2	SR
29	3.2	2-022	Earth Systems Science	PGC2	GLE1	CR-2
30	2.2	2-024	Life Science	PGC2	GLE1	SR
31	3.1	3-013	Earth Systems Science	PGC1	GLE3	CR-3
32	2.2	3-022	Life Science	PGC2	GLE1	CR-2
33	2.2	3-010	Life Science	PGC2	GLE1	SR
34	3.2	1-005	Earth Systems Science	PGC2	GLE2	SR
35	3.2	1-014	Earth Systems Science	PGC2	GLE2	SR
36	3.2	1-022	Earth Systems Science	PGC2	GLE1	CR-2
37	2.3	1-024	Life Science	PGC3	GLE2	SR
38	3.2	2-019	Earth Systems Science	PGC2	GLE2	CR-2

continued