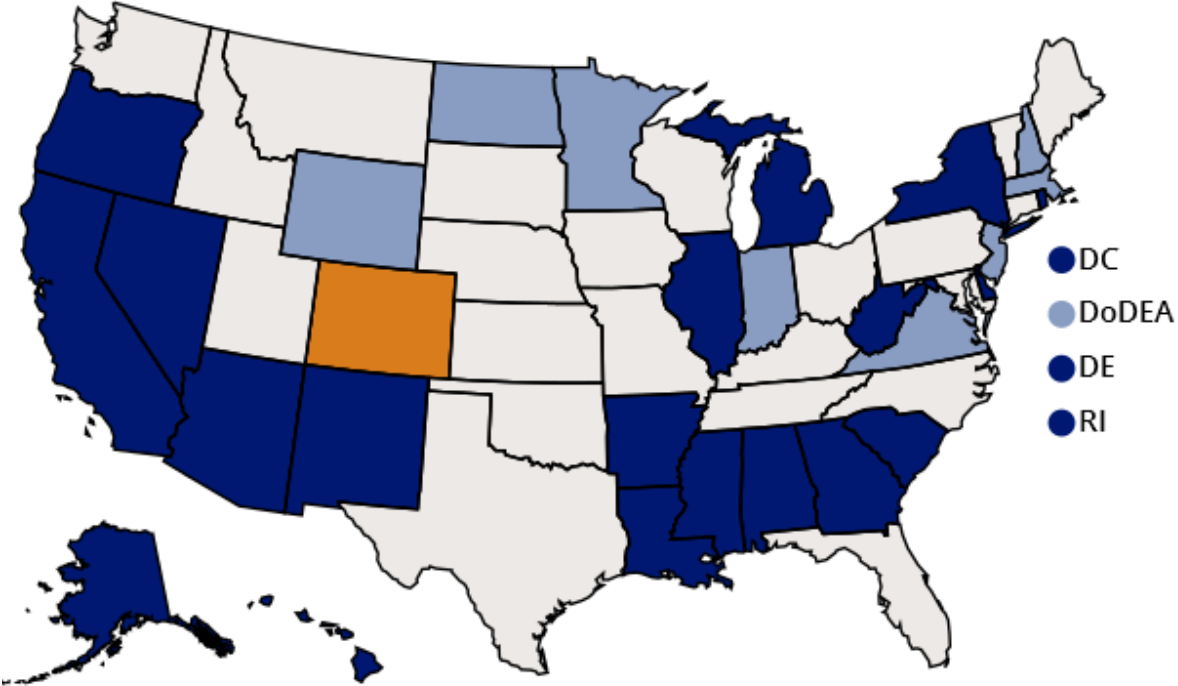


2015 NAEP: CO Math 4th Grade Results Graphics

2015 Math Grade 4: Average Scale Score (Figure 1)

Compare the Average Score in 2015 to Other States/Jurisdictions



In 2015, the average score in Colorado (242) was

- lower than those in 9 states/jurisdictions
- higher than those in 20 states/jurisdictions
- not significantly different from those in 22 states/jurisdictions

DoDEA = Department of Defense Education Activity (overseas and domestic schools)

Figure 1 shows how Colorado performed in the 2015 NAEP *Math* assessment in comparison to the other 49 states, the District of Columbia and the Department of Defense schools. This is a comparison using the average scale score for each state. Colorado which is shaded orange is the focal state. States shaded light blue scored higher than Colorado. Dark-blue shaded states scored lower than Colorado and grey-shaded states scored the same as Colorado. Because NAEP results are based on samples, there is a margin of error associated with each score or percentage. Therefore, only those differences in scores or percentages that meet NAEP’s standards for statistical significance are reported as higher or lower.

2015 Math Grade 4: Comparison to other states (Table 1)

Table 1 shows how Colorado performed in comparison to other states in average scale score. CO, the focal state, is shaded blue. States shaded green performed higher than CO. Massachusetts, Minnesota, New Hampshire, Indiana, Department of Defense schools, Wyoming, Virginia, New Jersey and North Dakota scored higher. The 22 states that are shaded yellow performed about the same as CO. The states are listed below in rank order with their respective scores.

Rank Order	2015 NAEP Grade 4 Math Average Scale Score: State	2015 Scale Score
1	Massachusetts	250.57
2	Minnesota	249.58
3	New Hampshire	249.15
4	Indiana	247.65
5	Department of Defense	247.58
6	Wyoming	246.76

7	Virginia	246.61
8	New Jersey	245.38
9	Washington	244.98
10	North Dakota	244.71
11	Texas	244.00
12	Nebraska	243.86
13	North Carolina	243.74
14	Ohio	243.60
15	Iowa	243.34
16	Pennsylvania	243.31
17	Wisconsin	243.31
18	Vermont	243.25
19	Florida	242.66
20	Utah	242.56
21	Maine	242.24
22	Kentucky	241.73
23	Colorado	241.56
24	Montana	241.29

25	Kansas	241.07
26	Tennessee	240.67
27	Connecticut	240.16
28	Oklahoma	239.76
29	South Dakota	239.72
30	Maryland	239.50
31	Missouri	238.96
32	Idaho	238.80

The 20 states that are shaded rose-color scored lower than Colorado. These states are listed below in rank order with their respective scores.

Rank Order	2015 NAEP Grade 4 Math Average Scale Score	2015 Scale Score
33	Delaware	238.68
34	Rhode Island	238.00
35	Hawaii	237.90
36	Oregon	237.75
37	Arizona	237.61

38	Illinois	237.31
39	South Carolina	237.09
40	New York	236.80
41	Georgia	236.45
42	Alaska	236.33
43	Michigan	235.73
44	Arkansas	235.22
45	West Virginia	235.20
46	Louisiana	234.28
47	Mississippi	234.24
48	Nevada	233.83
49	California	231.55
50	District of Columbia	231.31
51	New Mexico	231.17
52	Alabama	230.98

How Colorado Compares to Other States/Jurisdictions in Average Scale Score (Figure 2)

	4 th Grade
	Math
Number of States Scoring <u>Better</u> than Colorado	9
Number of States/Jurisdictions Scoring the <u>Same</u> as Colorado	22
Number of States/Jurisdictions Scoring <u>Lower</u> than Colorado	20

Figure 2 shows how Colorado performed in comparison to other states/jurisdictions in the grade 4 2015 NAEP *Math* assessment in average scale score. Nine states performed higher than CO. Twenty-two states/jurisdictions scored the same as CO. Last, twenty states scored lower than CO.

Average Scale Score: CO v. the National Public (Figure 3)

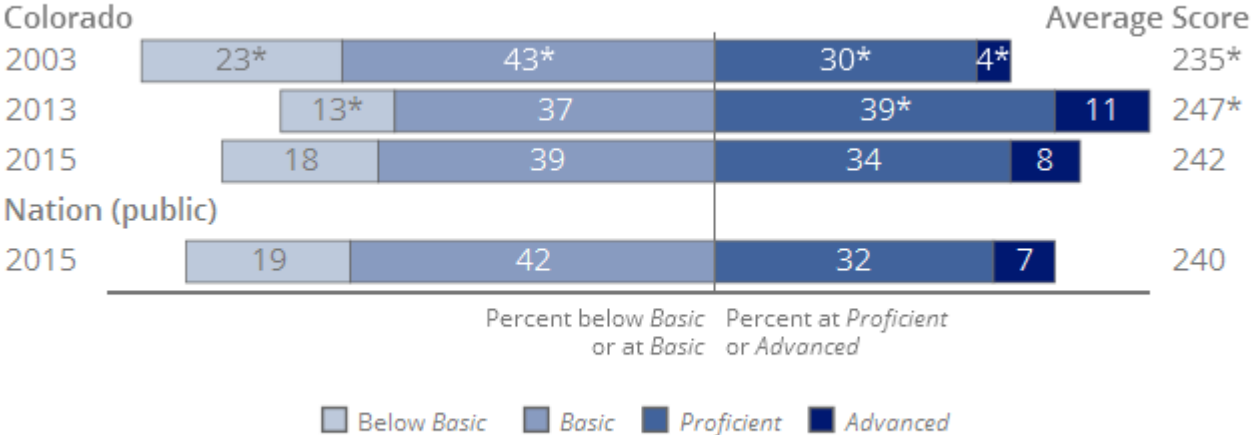
4 th Grade	
Math	
Colorado	* 242
National Public (NP)	* 240
Did Colorado perform (statistically) significantly higher than the National Public?	No, scored the same

*** Significantly lower than 2013**

Figure 3 shows how CO compares to the National Public in the 2015 grade 4 NAEP *Math* assessment in average scale score. CO had an average scale score of 242 and the National Public sample had a score of 240. CO performed the same as the National Public in the math assessment. Both CO and the National Public scored significantly lower than they did in the 2013 test (CO = 247, NP = 242.)

2015 Math Grade 4: Average Level Percentages and Average Score Results: (Figure 4)

Achievement-Level Percentages and Average Score Results



* Significantly different ($p < .05$) from state's results in 2015. Significance tests were performed using unrounded numbers. NOTE: Detail may not sum to totals because of rounding.

Figure 4 shows a comparison of the grade 4 trend results comparing 2003, 2013 and 2015 for CO using average scale score and achievement-level percentages. The 2015 National (public) scale score and achievement-level percentages are also compared. A score with an asterisk means that it is significantly different than the 2015 score.

Percent of Students Scoring at *Proficient or Above* (Figure 5)

	4th Grade
	Math
Colorado	*43↑
National Public	*39
Did Colorado perform (statistically) significantly higher than the National Public?	Yes

*** Significantly lower than 2013**

Figure 5 shows the percent of students for CO and the National Public scoring at the *Proficient or Above* achievement levels (*Proficient and Advanced*) on the 2015 grade four math test. CO had 43 percent of its students that scored at the *Proficient or Above* achievement levels. The National Public had 39 percent of the students that scored at the *Proficient or Above* achievement levels. Colorado had significantly more students score at *Proficient or Above* than the National Public. Both Colorado and the National Public had a lower percentage of students scoring at *Proficient or Above* in 2015 than in 2013.

How Colorado Compares to Other States/Jurisdictions in Scoring at *Proficient or Above* in 2015 (Figure 6)

	4 th Grade
	Math
Number of States Scoring <u>Better</u> than Colorado	6
Number of States/Jurisdictions Scoring the <u>Same</u> as Colorado	24
Number of States/Jurisdictions Scoring <u>Lower</u> than Colorado	21

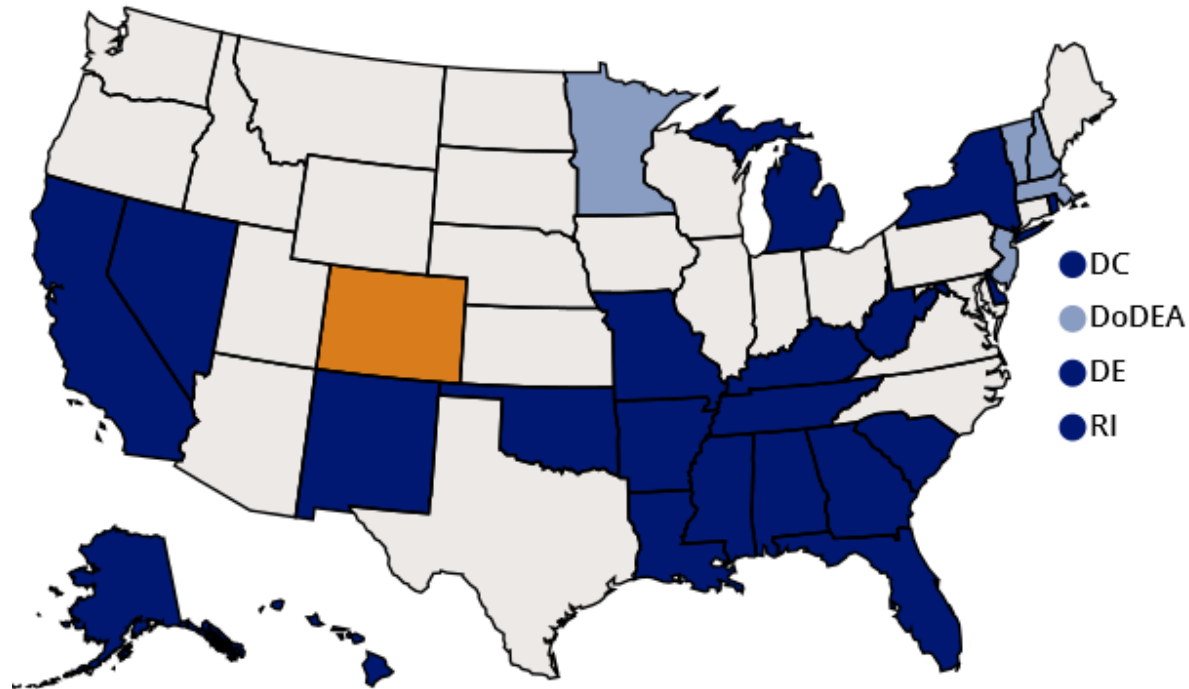
Figure 6 shows how Colorado performed in comparison to other states/jurisdictions in the grade 4 2015 NAEP *Math* assessment in scoring at the *Proficient or Above* achievement levels in 2015. Six states performed higher than CO. Twenty-four states scored the same as CO. Last, twenty-one states scored lower than CO.

NOTE: Statistical comparisons are calculated on the basis of unrounded scale scores or percentages. SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2013 and 2015 Mathematics Assessments.

2015 NAEP: CO Math 8th Grade Results Graphics

2015 Math Grade 8: Average Scale Score (Figure 1)

Compare the Average Score in 2015 to Other States/Jurisdictions



In 2015, the average score in Colorado (286) was

- lower than those in 6 states/jurisdictions
- higher than those in 22 states/jurisdictions
- not significantly different from those in 23 states/jurisdictions

DoDEA = Department of Defense Education Activity (overseas and domestic schools)

Figure 1 shows how Colorado 8th graders performed in the 2015 NAEP *Math* assessment in comparison to the other 49 states, the District of Columbia and the Department of Defense schools. This is a comparison using the average scale score for each state. Colorado which is shaded orange is the focal state. States shaded light blue scored higher than Colorado. Dark-blue shaded states scored lower than Colorado and grey-shaded states scored the same as Colorado. Because NAEP results are based on samples, there is a margin of error associated with each score or percentage. Therefore, only those differences in scores or percentages that meet NAEP’s standards for statistical significance are reported as higher or lower.

2015 Math Grade 8: Comparison to other states (Table 1)

Table 1 shows how Colorado 8th graders performed in comparison to other states in average scale score. CO, the focal state, is shaded blue. States shaded green performed higher than CO. Massachusetts, New Hampshire, Minnesota, New Jersey, Department of Defense and Vermont scored higher than Colorado. Twenty-three states/jurisdictions performed about the same as CO. These 23 states that scored the same as CO are shaded yellow and listed below in rank order with their respective scores. Twenty-two states scored lower than Colorado. These 22 states that scored lower than CO are shaded rose and listed below in rank order with respective scores.

Rank Order	2015 NAEP Grade 8 Math Average Scale Score: State	2015 Scale Score
1	Massachusetts	296.91
2	New Hampshire	294.41
3	Minnesota	294.15

4	New Jersey	293.37
5	DoDEA (Department of Defense)	290.53
6	Vermont	290.36
7	Wisconsin	289.08
8	North Dakota	288.24
9	Virginia	287.71
10	Montana	287.46
11	Indiana	287.18
12	Wyoming	286.67
13	Washington	286.51
14	Nebraska	286.5
15	Iowa	286.42
16	Utah	286.12
17	Colorado	285.54
18	Ohio	285.06
19	Maine	284.88
20	South Dakota	284.64

21	Connecticut	283.96
22	Kansas	283.87
23	Texas	283.79
24	Idaho	283.74
25	Pennsylvania	283.67
26	Maryland	283.15
27	Arizona	282.92
28	Oregon	282.81
29	Illinois	281.97
30	Rhode Island	281.45
31	North Carolina	281.33
32	Missouri	280.82
33	Alaska	280.49
34	New York	280.09
35	Delaware	279.81
36	Hawaii	279.34
37	Georgia	278.71
38	Tennessee	278.20

39	Michigan	278.17
40	Kentucky	277.95
41	South Carolina	275.83
42	California	275.32
43	Florida	275.32
44	Nevada	275.17
45	Arkansas	275.06
47	West Virginia	271.45
48	New Mexico	270.90
49	Mississippi	270.58
50	Louisiana	268.43
51	Alabama	266.56
52	District of Columbia	263.06

How Colorado Compares to Other States/Jurisdictions in Average Scale Score (Figure 2)

	8th Grade
	Math
Number of States Scoring <u>Better</u> than Colorado	6
Number of States/Jurisdictions Scoring the <u>Same</u> as Colorado	23
Number of States/Jurisdictions Scoring <u>Lower</u> than Colorado	22

Figure 2 shows how Colorado performed in comparison to other states/jurisdictions in the grade 8 2015 NAEP *Math* assessment in average scale score. Six states performed higher than CO. Twenty-three states/jurisdictions scored the same as CO. Last, twenty-two states scored lower than CO.

Average Scale Score: CO v. the National Public (Figure 3)

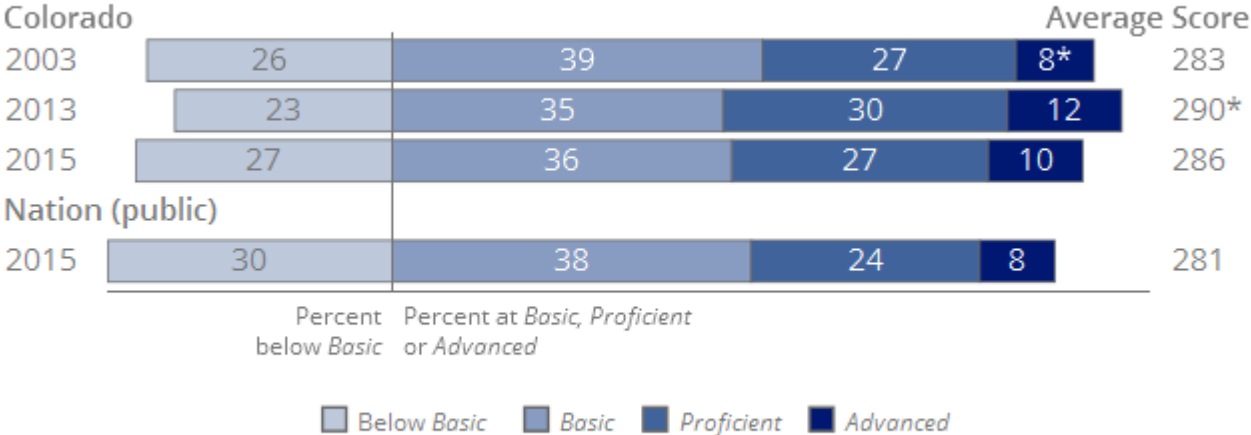
8 th Grade	
	Math
Colorado	*286
National Public (NP)	*281
Did Colorado perform (statistically) significantly higher than the National Public?	Yes

*** Significantly lower than 2013**

Figure 3 shows how CO compares to the National Public in the 2015 grade 8 NAEP *Math* assessment in average scale score. CO had an average scale score of 286 and the National Public sample had a score of 281. CO performed significantly higher than the National Public in the math assessment. Both Colorado and the National Public scored significantly lower than they did the 2013 test (NP = 285, CO = 290).

2015 Math Grade 8: Average Level Percentages and Average Score Results: (Figure 4)

Achievement-Level Percentages and Average Score Results



* Significantly different ($p < .05$) from state's results in 2015. Significance tests were performed using unrounded numbers.
 NOTE: Detail may not sum to totals because of rounding.

Figure 4 shows a comparison of the grade 8 trend results comparing 2003, 2013 and 2015 for CO using average scale score and achievement-level percentages. The 2015 National (public) scale score and achievement-level percentages are also compared. A score with an asterisk means that it is significantly different than the 2015 score.

Percent of Students Scoring at *Proficient or Above* (Figure 5)

	8 th Grade
	Math
Colorado	*37 ↑
National Public	*32
Did Colorado perform (statistically) significantly higher than the National Public?	Yes

*** Significantly lower than 2013**

Figure 5 shows the percent of students for CO and the National Public scoring at the *Proficient or Above* achievement levels (*Proficient and Advanced*) on the 2015 grade eight math test. CO had 37 percent of its students that scored at the *Proficient or Above* achievement levels. The National Public had 32 percent of the students that scored at the *Proficient or Above* achievement levels. Colorado had significantly more students score at *Proficient or Above* than the National Public in the 2015 NAEP 8th grade math test. Both Colorado and the National Public had a lower percentage of students scoring at *Proficient or Above* in 2015 than in 2013.

How Colorado Compares to Other States/Jurisdictions in Scoring at *Proficient or Above* in 2015 (Figure 6)

	8 th Grade
	Math
Number of States Scoring <u>Better</u> than Colorado	5
Number of States/Jurisdictions Scoring the <u>Same</u> as Colorado	24
Number of States/Jurisdictions Scoring <u>Lower</u> than Colorado	22

Figure 6 shows how Colorado performed in comparison to other states/jurisdictions in the grade 8 2015 NAEP *Math* assessment in scoring at the *Proficient or Above* achievement levels in 2015. Five states performed higher than CO. Twenty-four states scored the same as CO. Last, twenty-two states scored lower than CO.

NOTE: Statistical comparisons are calculated on the basis of unrounded scale scores or percentages. SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1996, 2003, 2005, 2007, 2009, 2011, 2013 and 2015 Mathematics Assessments.