

Using ISAT Percentiles for Reading and Mathematics to Describe the Impact of and the Recovery from the COVID Pandemic (2019-2025) for Idaho Students in Grades 3-8

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Three measures of school performance, once in widespread use, provide program evaluation and accountability data more useful than the percentage of students rated as proficient or above. These measures are averages (means), effect sizes and percentiles. This data display focused on the statewide performance of Idaho students using their percentile scores from the 2019 to 2025 Idaho Standard Achievement Tests (ISAT) of English Language Arts and Mathematics.

Average scores and effect sizes of average scale scores provide much information, but they hide a lot of performance evidence in a single measure of central tendency. Percentiles, on the other hand, provide additional evidence of performance across the distribution of student scale scores. They enable the comparison of the five student achievement levels across time.

A percentile is the value of a score in a dataset that indicates the percentage of scores that fall below it. For example, if a score is the 90th percentile, it means the score was higher than 90% of the other scores in that dataset. The five percentiles used for this student performance review were:

90th Percentile = Idaho's High Performing Student
75th Percentile = Idaho's High Average Student
50th Percentile = Idaho's Average Student for Grade Level
25th Percentile = Idaho's Low Average Student
10th Percentile = Idaho's Low Performing Student

ISAT Reading and Math, 2019-2025, Grades 3-8

The Idaho State Department of Education (SDE) provided ISAT statewide summary scores from 2019 to 2025 for grades 3-8, which included the average or mean scale score for all students in each grade who had a valid ISAT score and their related standard deviation. [Note: For ISAT 2025, the SDE unnecessarily redacted students attending small Idaho schools from the statewide average and statewide standard deviation, presumably to protect the scores and identity of those students. However, the performance of a district, a school, or an individual student simply cannot be identified using only the statewide parameters: namely, the number of students statewide with a valid ISAT score, the statewide average score and the statewide standard deviation.]

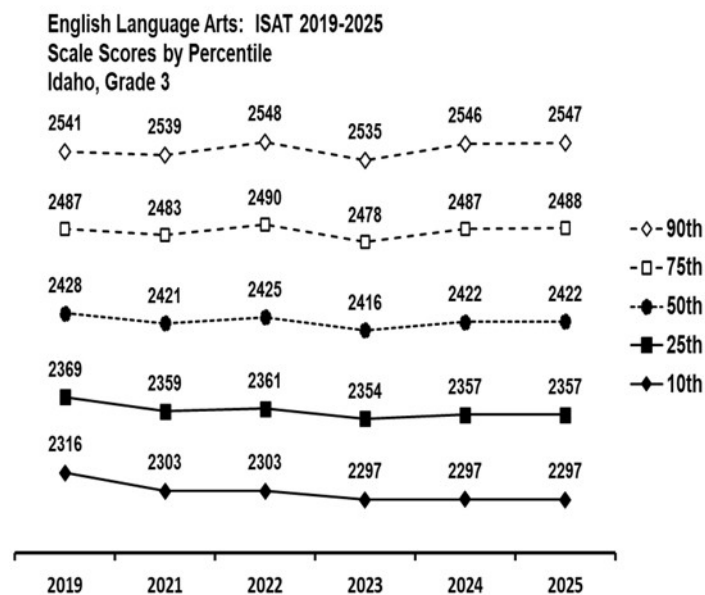
Calculation of Percentiles

Five percentiles were calculated for reading language arts and for mathematics at each grade 3 through 8 using the SDE provided ISAT means and standard deviations and the z scores associated with each of the target percentiles: percentile = (z score x standard deviation) + mean, where the relevant z-scores were retrieved from a Proportions of Area under the Normal Curve table of an undergraduate statistics textbook (Runyon and Haber, 1971).

Not All Students take the ISAT

It should be noted that this look at the Idaho Standards Achievement Test results focused only on students who took the ISAT. Not all Idaho students take the ISAT; it would be inappropriate to test all students. There are, for example, separate statewide assessments available for special education students with IEPs and for students with limited English language skills.

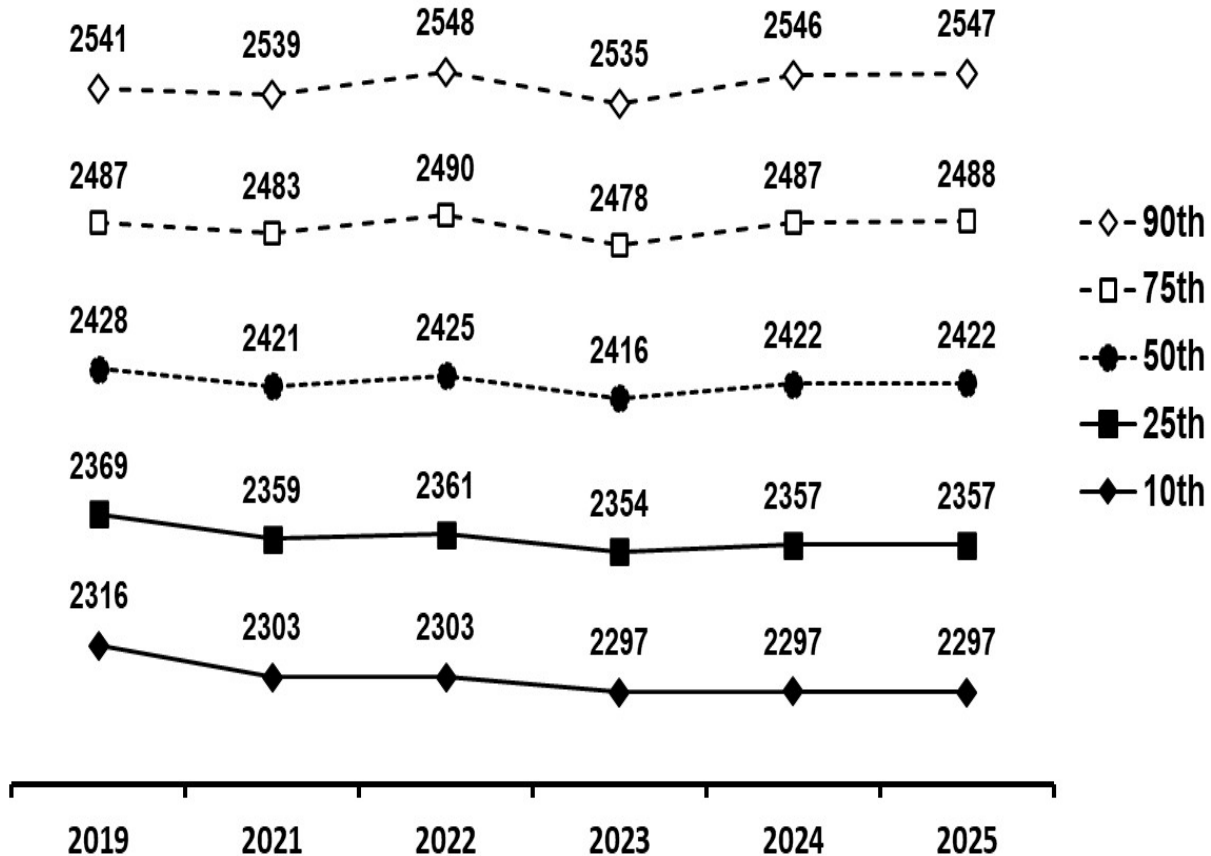
Data Displays



There are 12 data displays like the above graphic, which displays the 3rd grade ISAT English Language Arts for each of the percentiles at each of the five levels of student performance from 2019 (the last ISAT testing before the pandemic) through 2025. The displays for ISAT English Language Arts, grades 3 through 8, are first. The displays for ISAT Mathematics, grades 3 through 8, follow.

Students did not take the 2020 ISAT due to school closures.

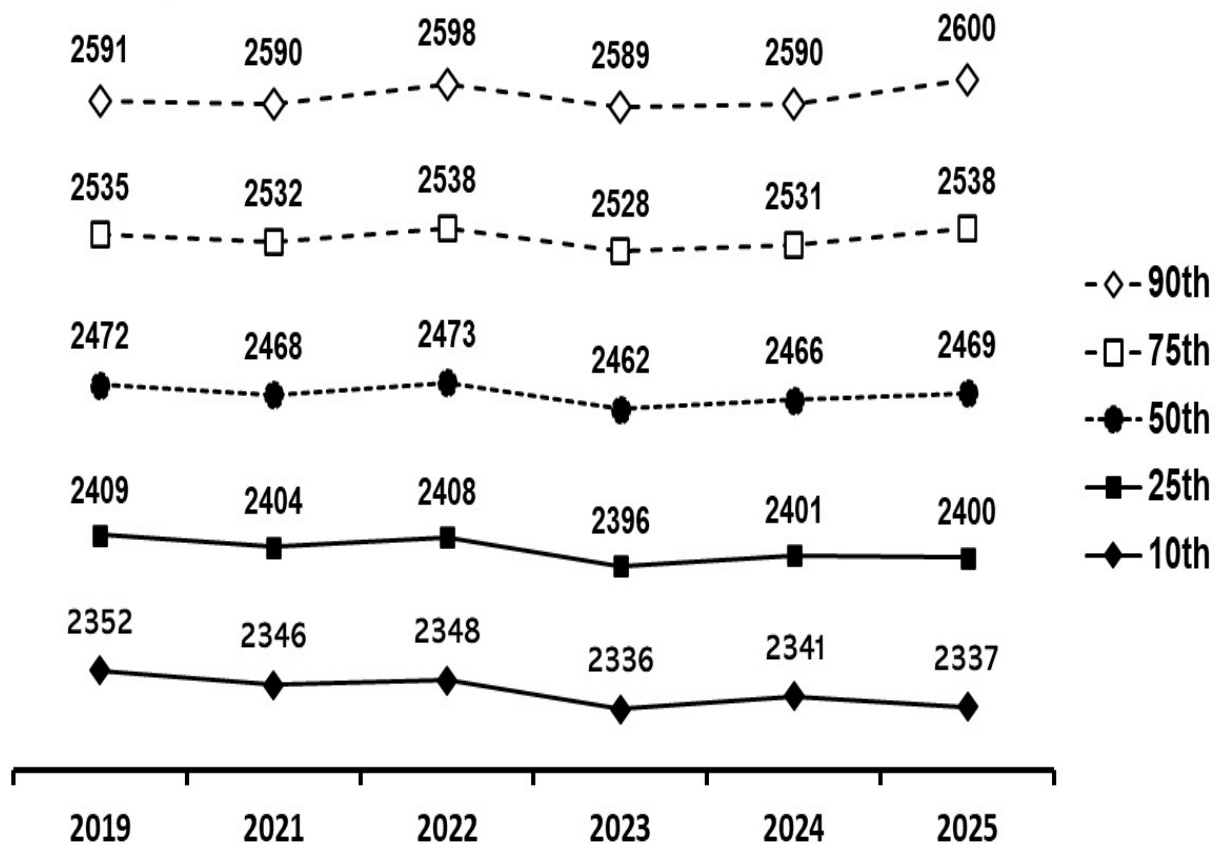
**English Language Arts: ISAT 2019-2025
Scale Scores by Percentile
Idaho, Grade 3**



On ISAT's 3rd grade English Language Arts Test from 2019 (the last testing before Idaho's schools were closed for the COVID pandemic) to the most recent testing in 2025 ...

- ▶ Idaho's **high performing students** (90th percentile) **increased 6 points** from 2019 (2541) to 2025 (2547).
- ▶ Idaho's **high average students** (75th percentile) **increased 1 point** from 2019 (2487) to 2025 (2488).
- ▶ Idaho's **average students** (50th percentile) **dropped 6 points** from 2019 (2428) to 2025 (2422).
- ▶ Idaho's **low average students** (25th percentile) **dropped 12 points** from 2019 (2369) to 2025 (2357).
- ▶ Idaho's **low performing students** (10th percentile) **dropped 19 points** from 2019 (2316) to 2025 (2297).

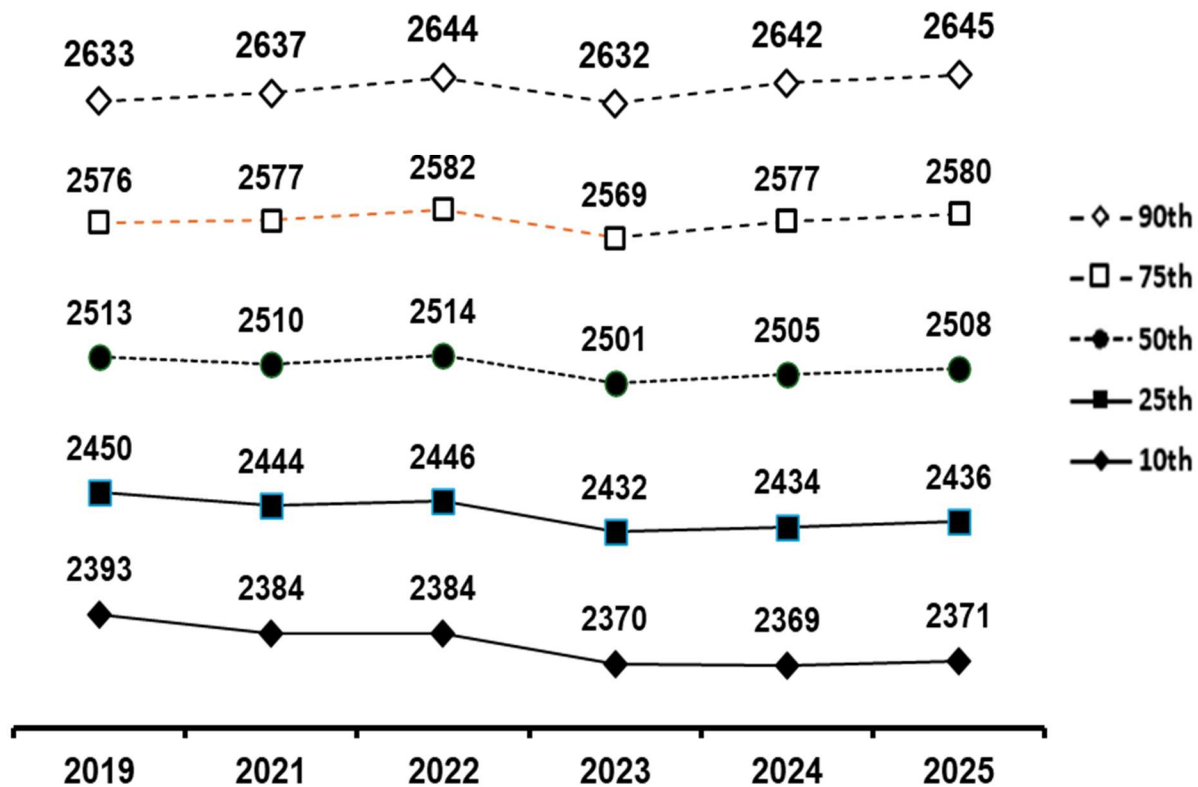
English Language Arts: ISAT 2019-2025 Scale Scores by Percentile Idaho, Grade 4



On ISAT's 4th grade English Language Arts Test from 2019 (the last testing before Idaho's schools were closed for the COVID pandemic) to most recent testing in 2025 ...

- ▶ Idaho's **high performing students** (90th percentile) **increased 9 points** from 2019 (2591) to 2025 (2600).
- ▶ Idaho's **high average students** (75th percentile) **increased 3 points** from 2019 (2535) to 2025 (2538).
- ▶ Idaho's **average students** (50th percentile) **dropped 3 points** from 2019 (2472) to 2025 (2469).
- ▶ Idaho's **low average students** (25th percentile) **dropped 9 points** from 2019 (2409) to 2025 (2400).
- ▶ Idaho's **low performing students** (10th percentile) **dropped 15 points** from 2019 (2352) to 2025 (2337).

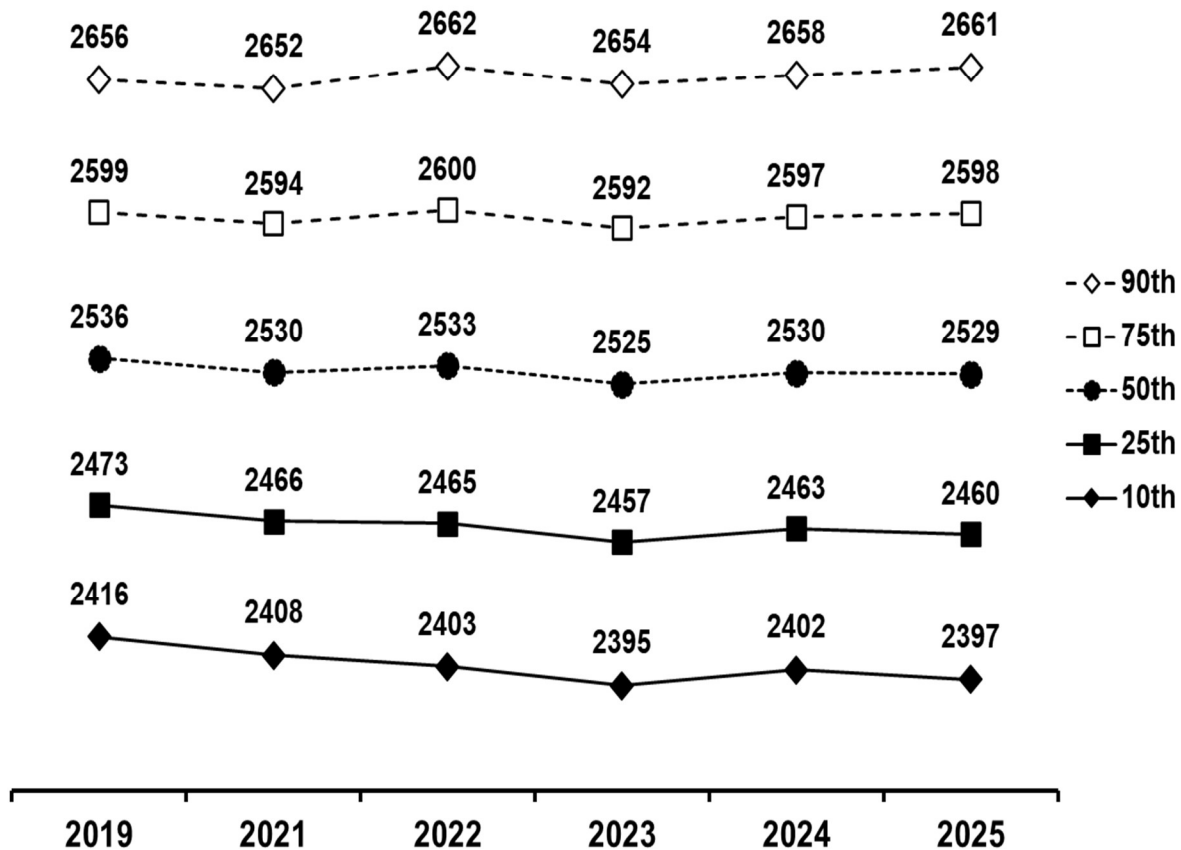
English Language Arts: ISAT 2019-2025 Scale Score by Percentile Idaho, Grade 5



On ISAT's 5th grade English Language Arts Test from 2019 (the last testing before Idaho's schools were closed for the COVID pandemic) to most recent testing in 2025 ...

- ▶ Idaho's **high performing students** (90th percentile) **increased 12 points** from 2019 (2633) to 2025 (2645).
- ▶ Idaho's **high average students** (75th percentile) **increased 4 points** from 2019 (2576) to 2025 (2580).
- ▶ Idaho's **average students** (50th percentile) **dropped 5 points** from 2019 (2513) to 2025 (2508).
- ▶ Idaho's **low average students** (25th percentile) **dropped 14 points** from 2019 (2450) to 2025 (2436).
- ▶ Idaho's **low performing students** (10th percentile) **dropped 22 points** from 2019 (2393) to 2025 (2371).

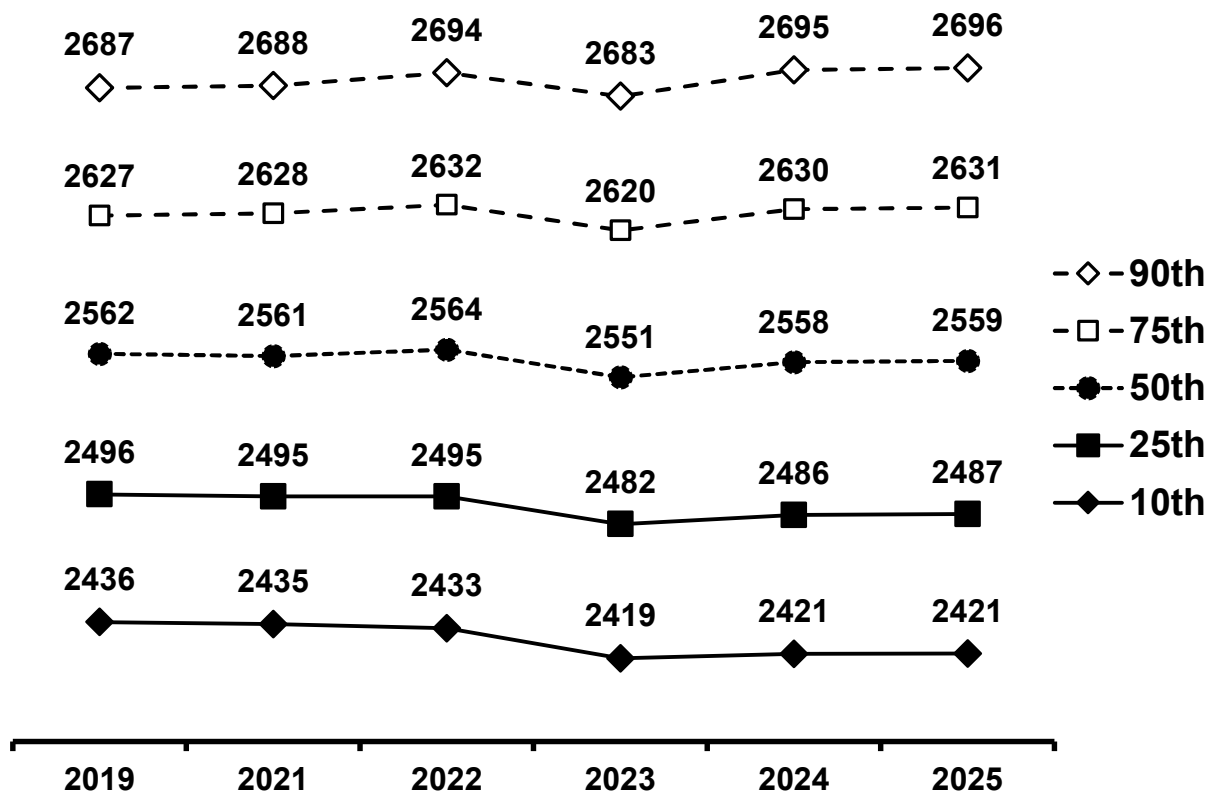
English Language Arts: ISAT 2019-2025 Scale Scores by Percentile Idaho, Grade 6



On ISAT's 6th grade English Language Arts Test from 2019 (the last testing before Idaho's schools were closed for the COVID pandemic) to most recent testing in 2025 ...

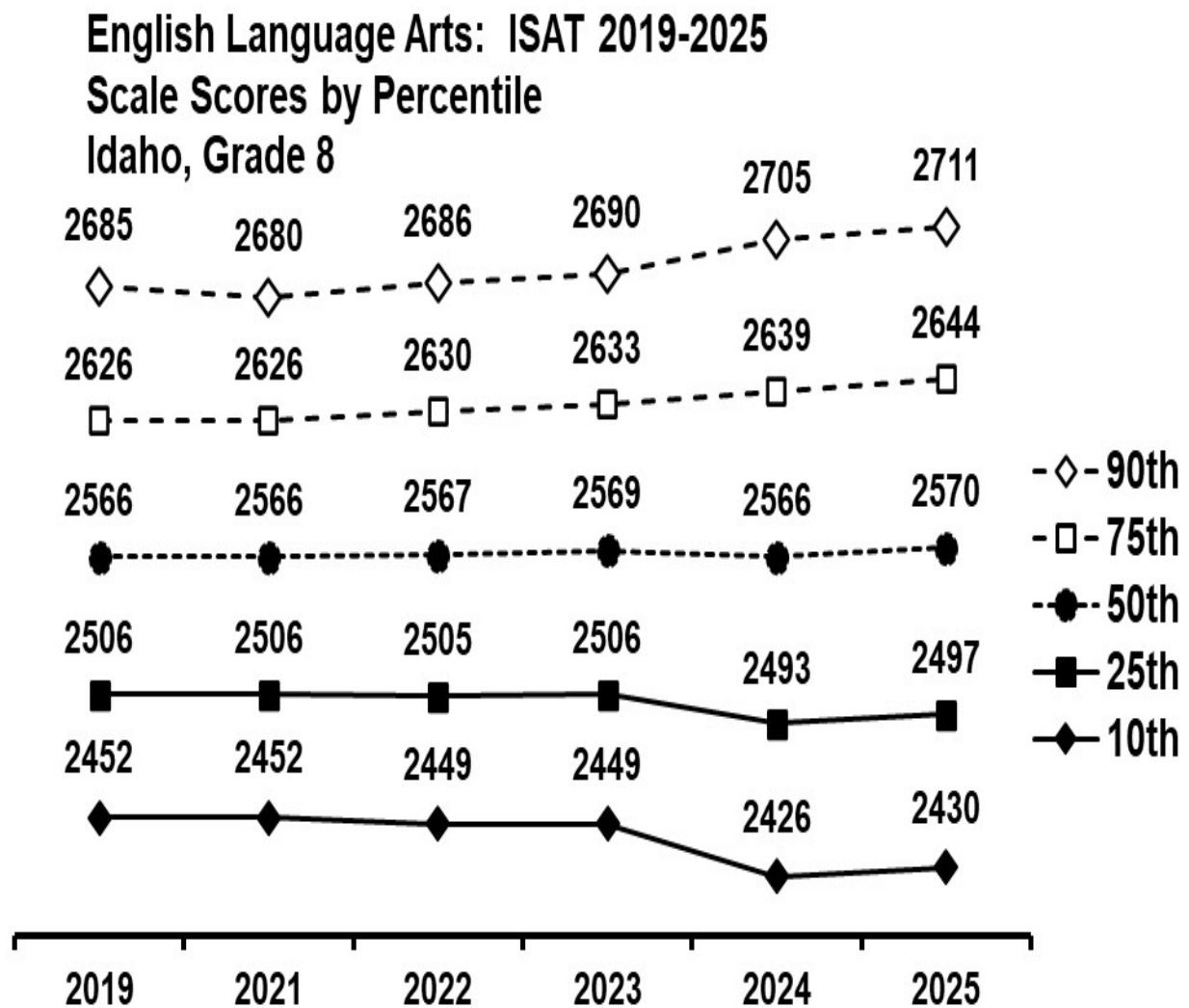
- ▶ Idaho's **high performing students** (90th percentile) **increased 5 points** from 2019 (2656) to 2025 (2661).
- ▶ Idaho's **high average students** (75th percentile) **dropped 1 point** from 2019 (2599) to 2025 (2529).
- ▶ Idaho's **average students** (50th percentile) **dropped 7 points** from 2019 (2536) to 2025 (2529).
- ▶ Idaho's **low average students** (25th percentile) **dropped 13 points** from 2019 (2473) to 2025 (2436).
- ▶ Idaho's **low performing students** (10th percentile) **dropped 19 points** from 2019 (2416) to 2025 (2397).

English Language Arts: ISAT 2019-2025 Scale Scores by Percentile Idaho, Grade 7



On ISAT's 7th grade English Language Arts Test from 2019 (the last testing before Idaho's schools were closed for the COVID pandemic) to most recent testing in 2025 ...

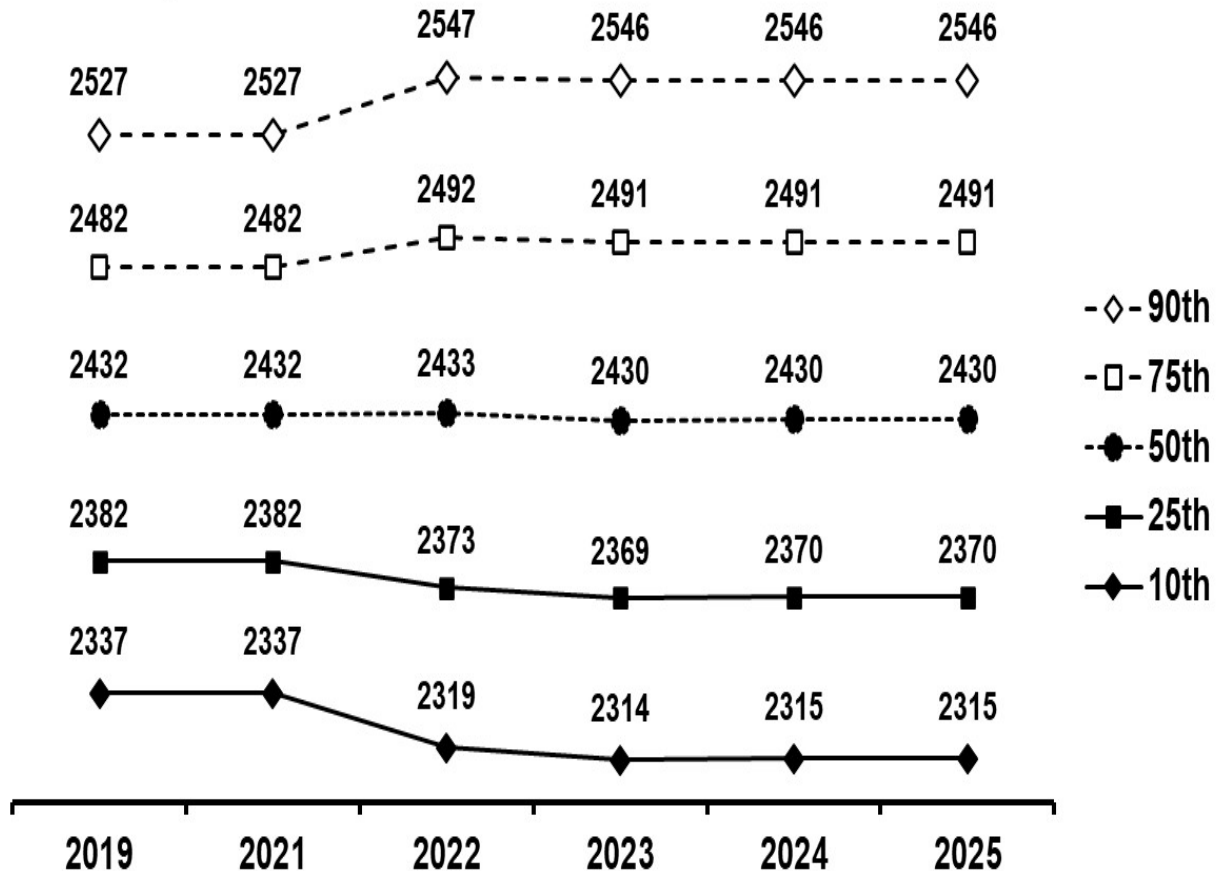
- ▶ Idaho's **high performing students** (90th percentile) **increased 9 points** from 2019 (2687) to 2025 (2696).
- ▶ Idaho's **high average students** (75th percentile) **increased 4 points** from 2019 (2627) to 2025 (2631).
- ▶ Idaho's **average students** (50th percentile) **dropped 3 points** from 2019 (2562) to 2025 (2559).
- ▶ Idaho's **low average students** (25th percentile) **dropped 9 points** from 2019 (2496) to 2025 (2487).
- ▶ Idaho's **low performing students** (10th percentile) **dropped 15 points** from 2019 (2436) to 2025 (2421).



On ISAT’s 8th grade English Language Arts Test from 2019 (the last testing before Idaho’s schools were closed for the COVID pandemic) to most recent testing in 2025 ...

- ▶ Idaho’s **high performing students** (90th percentile) **increased 26 points** from 2019 (2685) to 2025 (2711).
- ▶ Idaho’s **high average students** (75th percentile) **increased 18 points** from 2019 (2626) to 2025 (2644).
- ▶ Idaho’s **average students** (50th percentile) **increased 4 points** from 2019 (2566) to 2025 (2570).
- ▶ Idaho’s **low average students** (25th percentile) **dropped 9 points** from 2019 (2506) to 2025 (2497).
- ▶ Idaho’s **low performing students** (10th percentile) **dropped 22 points** from 2019 (2452) to 2025 (2430).

Mathematics: ISAT 2019-2025 Scale Scores by Percentile Idaho, Grade 3



On ISAT's 3rd grade Mathematics Test from 2019 (the last testing before Idaho's schools were closed for the COVID pandemic) to most recent testing in 2025 ...

► Idaho's **high performing students** (90th percentile) **increased 19 points** from 2019 (2527) to 2025 (2546).

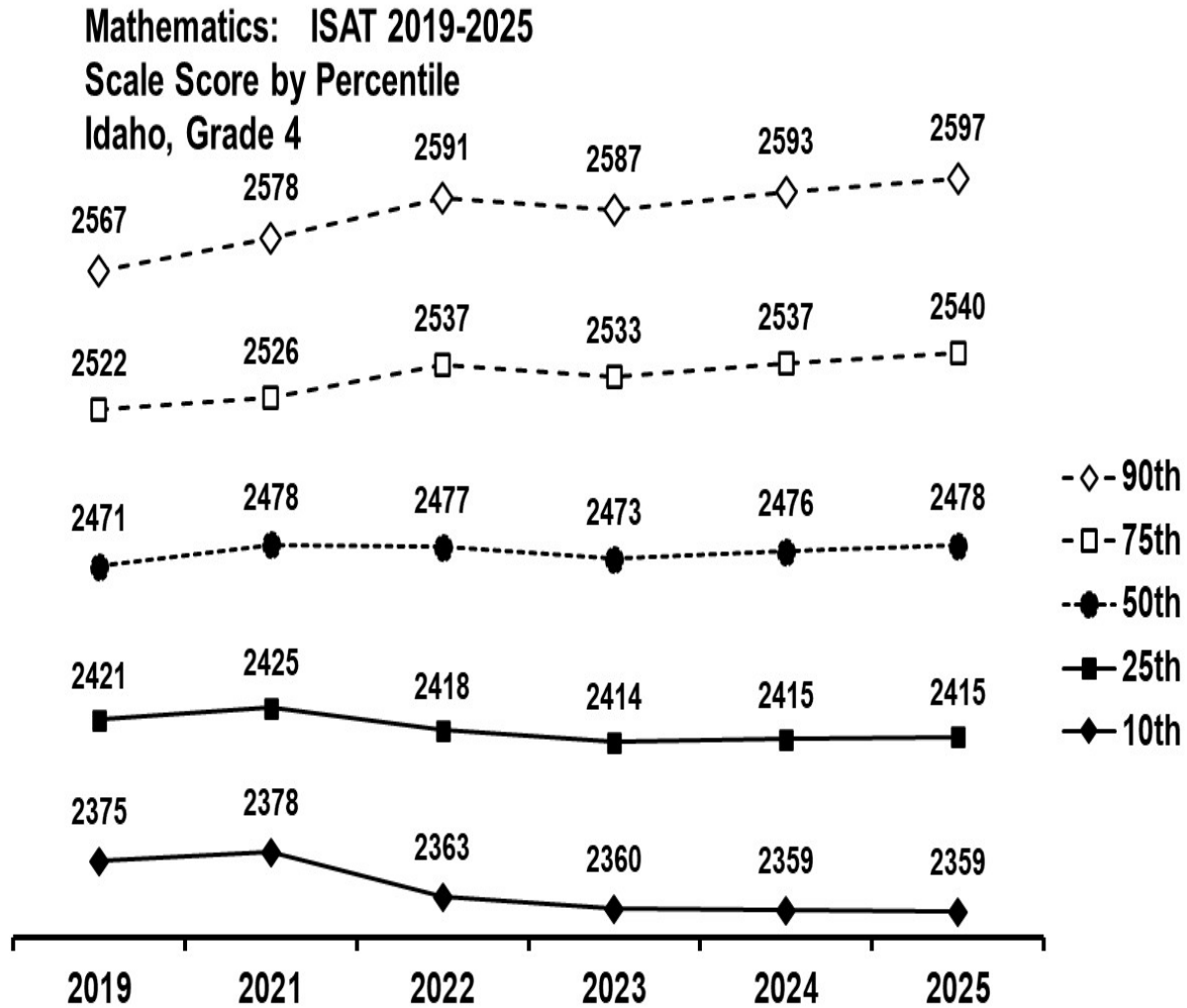
► Idaho's **high average students** (75th percentile) **increased 9 points** from 2019 (2482) to 2025 (2491).

► Idaho's **average students** (50th percentile) **dropped 2 points** from 2019 (2432) to 2025 (2430).

► Idaho's **low average students** (25th percentile) **dropped 12 points** from 2019 (2382) to 2025 (2370).

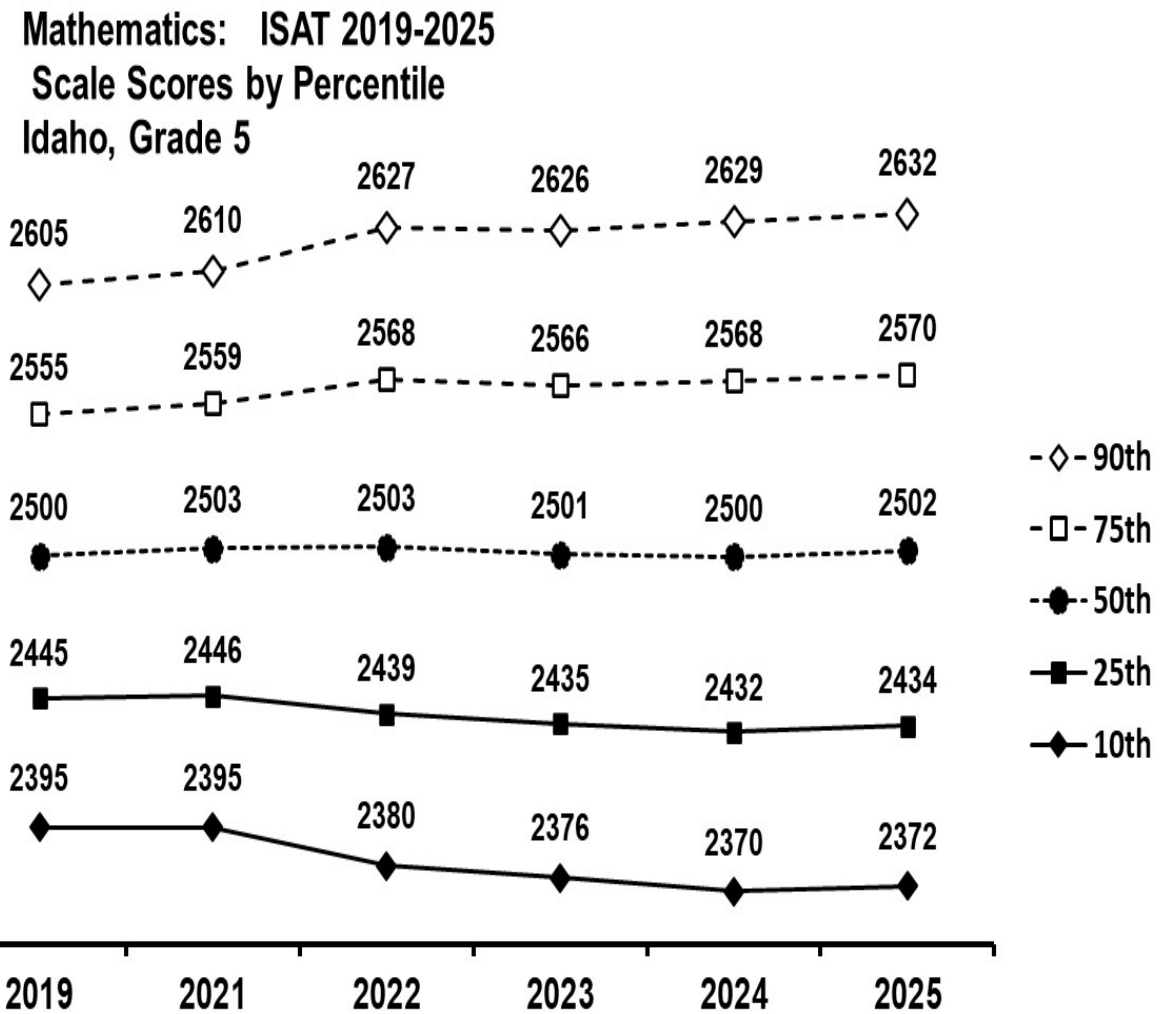
► Idaho's **low performing students** (10th percentile) **dropped 22 points** from 2019 (2337) to 2025 (2315).

ISAT Percentiles 2019-2025



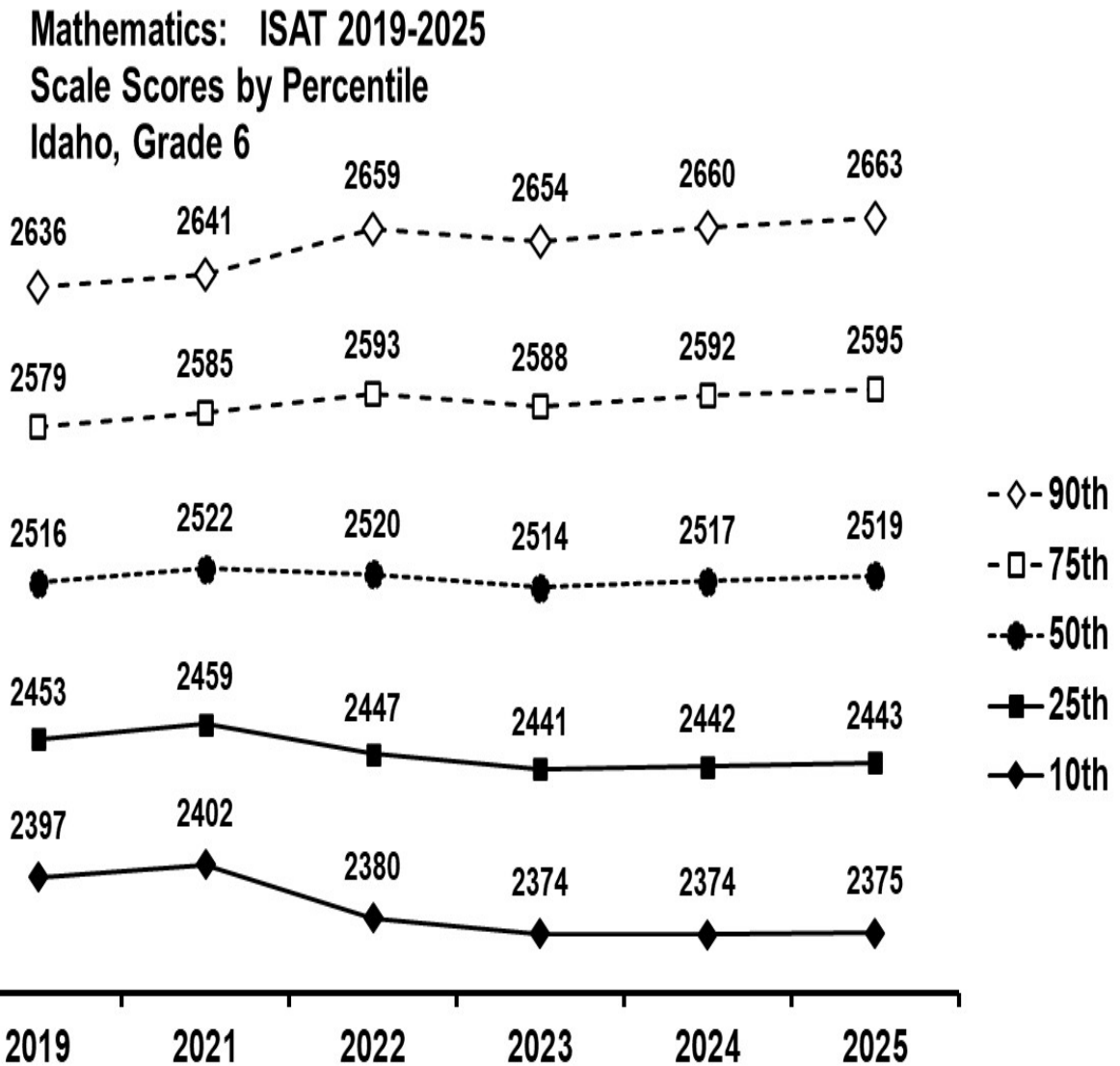
On ISAT's 4th grade Mathematics Test from 2019 (the last testing before Idaho's schools were closed for the COVID pandemic) to most recent testing in 2025 ...

- ▶ Idaho's **high performing students** (90th percentile) **increased 30 points** from 2019 (2567) to 2025 (2597).
- ▶ Idaho's **high average students** (75th percentile) **increased 18 points** from 2019 (2522) to 2025 (2540).
- ▶ Idaho's **average students** (50th percentile) **increased 7 points** from 2019 (2471) to 2025 (2478).
- ▶ Idaho's **low average students** (25th percentile) **dropped 6 points** from 2019 (2421) to 2025 (2415).
- ▶ Idaho's **low performing students** (10th percentile) **dropped 16 points** from 2019 (2375) to 2025 (2359).



On ISAT's 5th grade Mathematics Test from 2019 (the last testing before Idaho's schools were closed for the COVID pandemic) to most recent testing in 2025 ...

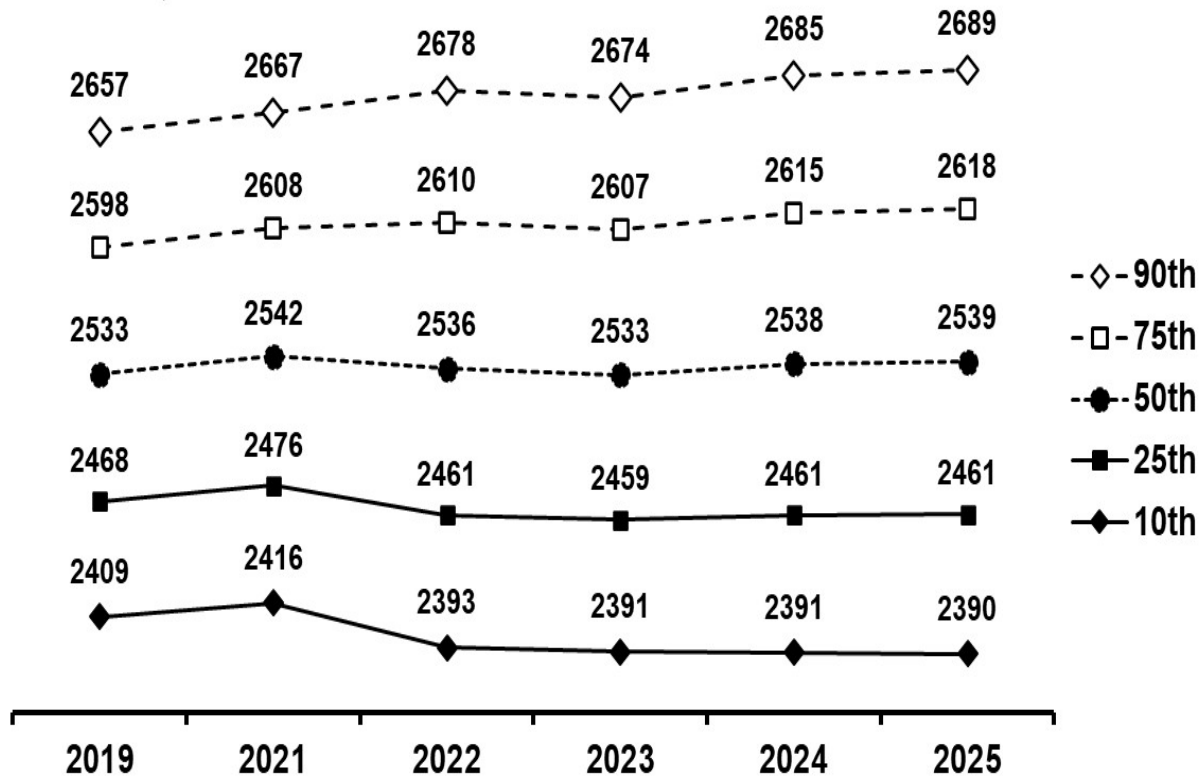
- ▶ Idaho's **high performing students** (90th percentile) **increased 30 points** from 2019 (2567) to 2025 (2597).
- ▶ Idaho's **high average students** (75th percentile) **increased 18 points** from 2019 (2522) to 2025 (2440).
- ▶ Idaho's **average students** (50th percentile) **increased 7 points** from 2019 (2471) to 2025 (2478).
- ▶ Idaho's **low average students** (25th percentile) **dropped 6 points** from 2019 (2421) to 2025 (2415).
- ▶ Idaho's **low performing students** (10th percentile) **dropped 16 points** from 2019 (2375) to 2025 (2359).



On ISAT's 6th grade Mathematics Test from 2019 (the last testing before Idaho's schools were closed for the COVID pandemic) to most recent testing in 2025 ...

- ▶ Idaho's **high performing students** (90th percentile) **increased 27 points** from 2019 (2636) to 2025 (2663).
- ▶ Idaho's **high average students** (75th percentile) **increased 16 points** from 2019 (2579) to 2025 (2595).
- ▶ Idaho's **average students** (50th percentile) **increased 3 points** from 2019 (2516) to 2025 (2519).
- ▶ Idaho's **low average students** (25th percentile) **dropped 10 points** from 2019 (2453) to 2025 (2443).
- ▶ Idaho's **low performing students** (10th percentile) **dropped 22 points** from 2019 (2397) to 2025 (2375).

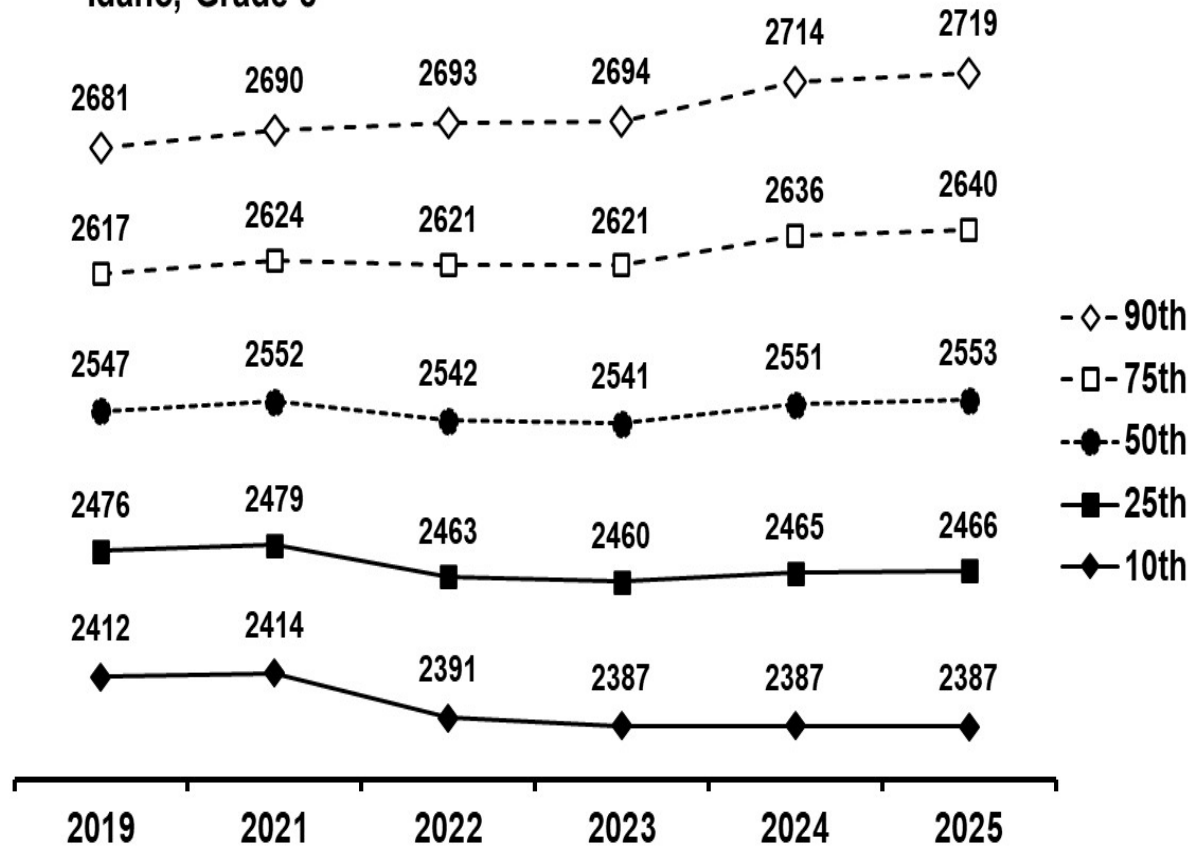
**Mathematics: ISAT 2019-2025
Scale Scores by Percentile
Idaho, Grade 7**



On ISAT's 7th grade Mathematics Test from 2019 (the last testing before Idaho's schools were closed for the COVID pandemic) to most recent testing in 2025 ...

- ▶ Idaho's **high performing students** (90th percentile) **increased 32 points** from 2019 (2657) to 2025 (2689).
- ▶ Idaho's **high average students** (75th percentile) **increased 20 points** from 2019 (2598) to 2025 (2618).
- ▶ Idaho's **average students** (50th percentile) **increased 6 points** from 2019 (2533) to 2025 (2539).
- ▶ Idaho's **low average students** (25th percentile) **dropped 7 points** from 2019 (2468) to 2025 (2461).
- ▶ Idaho's **low performing students** (10th percentile) **dropped 19 points** from 2019 (2409) to 2025 (2390).

**Mathematics: ISAT 2019-2025
Scale Scores by Percentile
Idaho, Grade 8**



On ISAT's 8th grade Mathematics Test from 2019 (the last testing before Idaho's schools were closed for the COVID pandemic) to most recent testing in 2025 ...

- ▶ Idaho's **high performing students** (90th percentile) **increased 38 points** from 2019 (2681) to 2025 (2719).
- ▶ Idaho's **high average students** (75th percentile) **increased 23 points** from 2019 (2598) to 2025 (2618).
- ▶ Idaho's **average students** (50th percentile) **increased 6 points** from 2019 (2547) to 2025 (2553).
- ▶ Idaho's **low average students** (25th percentile) **dropped 10 points** from 2019 (2476) to 2025 (2466).
- ▶ Idaho's **low performing students** (10th percentile) **dropped 25 points** from 2019 (2412) to 2025 (2387).

Focus on Change: 2019 to 2025**ISAT English Language Arts****Scale Score Gains/Loses by Percentile, 2019 to 2025**

Percentile	Grade						Total
	3	4	5	6	7	8	
90	6	9	12	5	9	26	67
75	1	3	4	-1	4	18	29
50	-6	-3	-5	-7	-3	4	-20
25	-12	-9	-14	-13	-9	-9	-66
10	-19	-15	-22	-19	-15	-22	-112

ISAT Mathematics**Scale Score Gains/Loses by Percentile, 2019 to 2015**

Percentile	Grade						Total
	3	4	5	6	7	8	
90	19	30	30	29	32	38	178
75	9	18	18	16	20	23	104
50	-2	7	7	3	6	6	27
25	-12	-6	-6	-10	-7	-10	-51
10	-22	-16	-16	-22	-19	-25	-120

Finding 1: The ISAT data for ISAT English Language Arts suggest performance of Idaho's high performing students and high average students might have been served at their performance levels while Idaho's average students, low average students and low performing students were less fortunate.

Finding 2: The ISAT data for ISAT Mathematics suggest performance of Idaho's high performing students, high average students and average students might have been served at their performance levels while Idaho low average students and low performing students were less fortunate.

The language and math test results as displayed do suggest problems for Idaho's public education, but they do not identify the possible problem(s). Consider two questions that need answers: First, has Idaho implemented a comprehensive educational program intended to serve all Idaho students at their respective ability levels? Second, does Idaho use a state achievement test that meets current assessment principles and practices, and conforms to current data analysis & reporting practices?

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