

Academic Achievement

High School Level

What are the academic achievement indicators and what do they measure?

The New York State ESSA accountability system uses two academic achievement indicators:
Weighted Average Achievement and **Core Subject Performance**.



Weighted Average Achievement measures academic achievement **in an accountability cohort** using a denominator that **meets federal requirements**.



Core Subject Performance measures the academic achievement of **students in an accountability cohort with valid assessment results**.

At the high school level, the Weighted Average Achievement and Core Subject Performance indicators measure student performance in four subjects.

English Language Arts (ELA)



Math



Science



Social Studies



Restored to calculations starting with 2024-2025 school year (SY) results

What assessment data are used to calculate the academic achievement indicators?

Single-year results from the following assessments are used for students who are members of the accountability cohort as of June 30th.

- Regents Examinations
- Approved Alternatives to Regents Examinations
- New York State Alternative Assessment

Students' scale scores are converted into **accountability achievement levels** ranging from **1 to 4**.

What is the accountability cohort?

The accountability cohort consists of all students who entered Grade 9 four years prior and were enrolled in the school on BEDS Day (typically the first Wednesday of October) and on April 1 of the reporting year.

How does minimum n-size apply to the academic achievement indicators?

NYSED uses a minimum n-size of **20 student records** for accountability indicator calculations. A Weighted Average Achievement indicator will be calculated for each accountability subgroup in an accountability cohort when **the number of students that are required to take the ELA, math, science, and social studies assessments combined** is greater than or equal to 20. A Core Subject Performance indicator will be calculated when **the number of valid ELA, math, science, and social studies assessment results combined** for an accountability subgroup in an accountability cohort is greater than or equal to 20.

How are the academic achievement indicators calculated?

Step 1: Calculate ELA, math, science, and social studies subject Performance Indices (PIs) using the formula below.

$$PI = \frac{(\# \text{ Level 2}) + 2(\# \text{ Level 3}) + 2.5(\# \text{ Level 4})}{\text{Denominator}} \times 100$$

Denominators

Weighted Average Achievement: The number of students in the accountability cohort.

Core Subject Performance: The number of tested students in the accountability cohort.

Step 2: Calculate the Weighted Average Achievement Index or Core Subject Performance Index using the formula below.

$$\text{Index} = \frac{3(\text{ELA PI}) + 3(\text{Math PI}) + 2(\text{Science PI}) + 2(\text{Social Studies PI})}{10}$$

Step 3: Assign Accountability Levels

Weighted Average Achievement Levels are assigned using statewide **rank-based cut points** as seen in the table below.

Core Subject Performance Levels are assigned using **static cut points** established based on ranked 2023-2024 SY outcomes (ranking as seen in table below) and reestablished every three years.

Rank	Level
$\leq 10\%$	1
10.1-50%	2
50.1-75%	3
$\geq 75\%$	4

What is an example of academic indicator calculations?

Let's calculate the Academic Achievement Levels for School R's All Students Group.

1. Calculate ELA, math, science, and social studies subject PIs

Subject	# Students in Accountability Cohort	# Tested Students	# Level 1	# Level 2	# Level 3	# Level 4
ELA	150	132	25	37	42	28

$$\text{Weighted ELA PI} = \frac{(37) + 2(42) + 2.5(28)}{150} \times 100 = 127.3$$

$$\text{Core ELA PI} = \frac{(37) + 2(42) + 2.5(28)}{132} \times 100 = 144.7$$

2. Calculate Weighted Average Achievement Index or Core Subject Performance Index

Subject	# Students in Accountability Cohort	# Tested Students	# Level 1	# Level 2	# Level 3	# Level 4	PI Numerator	Weighted PI	Core PI
ELA	150	132	25	37	42	28	191	127.3	144.7
Math	150	130	28	27	41	24	169	112.7	130
Science	150	125	24	34	39	27	179.5	119.7	143.6
Social Studies	150	121	26	30	40	25	172.5	115	142.6

Weighted Average Achievement Index

$$\frac{3(127.3) + 3(112.7) + 2(119.7) + 2(115)}{10} = 118.9$$

Core Subject Performance Index

$$\frac{3(144.7) + 3(130) + 2(143.6) + 2(142.6)}{10} = 139.7$$

3. Assign Weighted Average Achievement Level or Core Subject Performance Level

Rank all schools based on Weighted Average Achievement Index and assign Weighted Average Achievement Level using rank-based cut points.

School Index	Rank
School J 50.5	1
School R 118.9	2
School D 130.2	3
School P 147.7	4
School T 162.4	5

Rank	Weighted Average Achievement Level
≤ 10%	1
10.1-50%	2
50.1-75%	3
≥ 75%	4

Note: Assume five high schools in New York State for example purposes.

Assign Core Subject Performance Levels using static cut points based on ranked outcomes from 2023-2024 SY results.

Core Subject Performance Index	Core Subject Performance Level
0-70	1
70.1-133.3	2
133.4-165.5	3
165.6-250	4

Note: [Click here for the Core Subject Performance Level static cut points.](#)

How can these accountability indicators be used for continuous improvement?

Schools and subgroups with Weighted Average Achievement Level 1 or 2 and Core Subject Performance Level 1 may be identified for more rigorous support models.

Analyzing academic achievement indicator data can support goal-setting, instructional decision-making, and the needs assessment process.

Data used for calculating academic achievement indicators can be found in the SIRS 114 report.

Want to know more?

For more tools and resources about the New York State ESSA Accountability System, visit the NYSED School and District Accountability Resources and Data website.



<https://www.nysed.gov/accountability/school-and-district-accountability-resources-and-data>

To learn more about resources and supports for identified schools and districts, visit the NYSED Office of Accountability’s Continuous Improvement website.



<https://www.nysed.gov/accountability/continuous-improvement>