

Assessment Instrument Description: Scantron Performance Series

Element	Description	
Instrument Name	Name of specific instrument (more than vendor name).	Performance Series
Vendor	Name of the company or organization that produces the instrument.	Scantron Corporation
Purpose (Intended Use)	The described purpose and appropriate uses of the instrument.	<p>Performance Series is a research-based, criterion-referenced computer-adaptive test that lets K-12 educators quickly pinpoint the instructional level of students across a range of subjects, capture immediate results, and produce standards-based reports including suggested learning objectives, on a scaled score.</p> <p>Performance Series is a fully-integrated computer adaptive diagnostic assessment ideal for predicting performance on the state tests, as well as tracking student growth over time Performance Series enables educators to quickly pinpoint the proficiency levels of students corresponding to state specific standards. This information then allows teachers to more accurately place students, diagnose instructional needs – including instructional adjustments – and measure student gains.</p>
Population	Who (which students) could be assessed using the instrument.	<p>Reading, Grades 2-12</p> <p>Language Arts, Grades 2-8</p> <p>Life Science, Grades 2-8</p> <p>Reading Foundations, Grades K-2</p> <p>Mathematics, Grades 2-9</p> <p>High School Algebra and Geometry</p> <p>Math en Espanol, Grades 2-9</p>
When? How frequently?	How frequently the instrument can be administered in a school year, and recommended or	<p>Performance Series tests are generally given to students at the beginning of each year, or as they enter school, as a diagnostic assessment to accurately measure learning levels and guide student placement. Performance Series tests are administered again to accurately measure gains and growth. The Performance Series test can be administered as often as the district or school chooses. Scantron recommends at least 12 weeks between tests. Each test is unique to its content which is measured</p>

	required administration windows.	against standards such as state standards or Common Core. The second and subsequent administrations are not a “retest” of the content of the initial administration.
Content Area (s)	Content area or areas being assessed.	Reading, Language Arts, Life Science, Math (English and Spanish) Algebra and Geometry.
Learning Objectives	Specific learning objectives being assessed, at as detailed a level as is provided. This may be "topics" or categories or may be actual learning objective statements.	<p>Grade level skills (based on States Curriculum Alignment Guide or national averages)</p> <p>Reading measures: The Reading portion of Performance Series covers items grouped into four units: Vocabulary, Fiction, Nonfiction, and Long Passages.</p> <p>Mathematics measures: The Mathematics portion of Performance Series covers items grouped into five units: Number & Operations, Algebra, Geometry, Measurement, and Data Analysis & Probability.</p> <p>Language Arts measures: The Language Arts portion of Performance Series covers items grouped into four units: Parts of Speech, Sentence Structure, Punctuation, and Capitalization.</p> <p>Life Science measures: The Life Science portion of Performance Series covers items grouped into three units: Living Things, Ecology, and Science Process.</p>
Individual Metrics	The scores provided at the individual (student) level.	<ul style="list-style-type: none"> • Scaled Score (1000-3700) - A simple linear transformation of the student ability estimate. Since negative ability estimates are possible values, a transformation is applied to make all reported scores positive in value. This removes any negative judgments that a negative value might suggest. • National Percentile Rank (NPR) - Compares student Scaled Scores to a normative sample for Mathematics and Reading tests. A NPR is grade-dependent and expresses the percentage of students that would score below the Scaled Score for the given student and his or her grade level. NPRs are only available for students that tested within the following windows: <ul style="list-style-type: none"> • Fall — July 16 to November 30 • Winter—December 1 to February 29 • Spring — March 1 to July 15 • Grade Level Estimate (optional) - The positioning of a student’s Scaled Score to reflect an estimated grade level based on Performance Series national norm research. • Gains Analysis - Normalized gains that were made in a specified testing period. • Normal Curve Equivalent (NCE) - A score standardized with a mean of 50 and divided into 99 equal units. NCE scores are all equally spaced on the distribution; that is, it is an equal interval scale. • Reading Rate - Based on a silent reading rate, it is calculated by counting the number of words in the passages the student read and dividing that number by the time it took the student to read those

passages. Certain test taking techniques may alter the accuracy of this rate. This score will only be accurate if the student reads the story before answering questions. An aid to interpreting this score would be Pilulski's Silent Reading Fluency Scales or another similar reference.

- Unit Score Range (USR) - An independent estimate of ability that is based on responses from each unit within a subject, with a confidence interval (range) based upon 1 Standard Error of Measure (+/-). The USR represents the possible range that a student may score, within each unit if he or she was to take the test again.
- Performance Bands - Selected aggregate in the default performance bands range of scores set by Location Controller.
- Lexile (optional) - The Lexile Framework® provides a common, development scale for matching reader ability and text difficulty. Scantron works with MetaMetrics to provide this optional reporting feature in Performance Series to aid in the interpretation and use of reading assessment results. Performance Series Reading Scaled Score is statistically linked to the Lexile measure, making it possible to produce an equivalent Lexile measure for every Performance Series Reading Scaled Score.

<p>Individual Comparison Points (cut scores)</p>	<p>Information provided regarding how good is good enough performance on the instrument. Comparison information should be available for every individual metric. This may be performance level ratings with specific cut scores.</p>	<p>Advanced: 95th percentile Interquartile range or Grade level: 25th -75th percentile At risk – below interquartile range Target Gains: Comparison to mean growth by grade, quartile, or decile group</p> <p>**Scantron has provided CDE with National Percentile Ranks of their scaled scores, so CDE can apply the 15/50/90 or 40/60/90 (AEC) cut points and apply that to their NPRs for CDE cut points. Scantron can provide any set of NPR values for CDE to create custom performance bands. See Technical Report for individual NPR values.</p> <p>If a district would like cut scores directly related to the state assessment, Scantron can work with the district and others in the state to create a Predictability Study.</p>
<p>Aggregate Metrics</p>	<p>Scores provided at the group level. The groups for which scores are available. Note the groups could be grade</p>	<p>Mean Scaled Score, Mean Unit Score, or the Unit Scaled Score, NPR (where available), Gains and Performance Band Percentage and Counts.</p> <p>Student performance data is available by district, student, school, grade, group, course, class, standard, and staff member.</p>

	level, school, district, or scores pooled on other variables (e.g. race/ethnicity, gender, IEP status, FRL status). Specify the group(s) and the score(s) provided.	Scores also can be grouped by time frame, and demographics such as gender, age, ethnicity, citizenship, and special status.
Aggregate Comparison Points (cut scores)	Information provided regarding how good is good enough performance at the group level.	<p>Performance Bands for Quartiles against NPR, by grade level or custom performance bands can be created by grade, subject, and testing window to meet their specific needs.</p> <p>Growth Category: Comparison to mean growth by grade, quartile, or decile group, using standard deviations to rank Far Above, Above, Below, or Far Below.</p> <p>If a district would like cut scores directly related to the state assessment, Scantron can work with the district and others in the state to create a Predictability Study for Colorado performance bands.</p>
Aggregate Comparison Points (cut-scores) CDE	Cut scores identified by CDE for requests to reconsider	(See Table A below)
Alignment	Information provided by the vendor about alignment of this instrument to other instruments, standards, etc.	<p>Mathematics scaled scores were used to predict the CSAP scaled scores using a simple linear regression model.</p> <p>All of the regression equations significantly predicted the outcome measures. All of the R^2 values were in excess of .50, with most exceeding .70, indicating that the majority of variance in state test scores among students can be predicted by the <i>Performance Series</i> assessment.</p> <p>Overall, the relationship between <i>Performance Series</i> and CSAP math scores is strong and stable across time. These findings are consistent with other correlation and predictive validity studies between the <i>Performance Series</i> and other state-mandated assessment programs.</p>
Data Reports	Description of data reports that are provided/available	<p>Student Profile Report:</p> <p>The Student Profile Report provides Teachers and Parents a look at the student’s overall ability level and growth in one report.</p>

at the individual and aggregate level(s).

Suggested Learning Objectives Report:

The Suggested Learning Objectives (SLO) Report provides Teachers assistance in planning individualized learning plans based at the student’s true ability level.

Class Profile Report:

The Class Profile Report provides Teachers a quick overview of the class understanding, with both the Scaled Score and the unit-specific objective list. This can be used to create sub-groups based on ability, performance band rating, or to target the best skill for larger group instruction.

All Subjects Summary Report (by Grade):

The All Subjects Summary Report provides Administrators the ability to immediately see the average score in each subject area for the entire school or district.

Summary Report (by Class):

The Summary Report by Class provides Teachers the ability to compare class performance and create groups by ability level distinctions based on performance distribution.

Gains Report (by Student/District-defined Group):

The Gains Report displays growth over time and is available by individual student, class, or group. This report helps districts, schools, and teachers to measure gains on a consistent scale, thereby informing instruction and guiding progress towards accountability standards.

Gains Analysis Report:

The Gains Analysis Report enables evaluation of year-long growth against average gains observed in the national norm group and is available by individual student, class, or group. Norm group comparison selections are available to best match district goals for grade level, quartile, or decile groups. This report is available for Reading, Math, Language Arts, and Science tests.

Gains Analysis Report (by Student):

The Gains Analysis Report by student provides additional details for use at the beginning of the year or at the end. This example uses the Decile norm group selection for growth comparison.

National Percentile Rankings (NPR) Report:

The NPR uses the Scaled Score to compare the student to members of the norm group within the same grade level. This information is available for individuals, classes and groups.

Performance Band Report (by School):

This report provides an aggregate view of student performance, based upon categories defined by the district or by Scantron. [Scantron’s performance bands are all created based upon national norm research.] Performance Bands can be changed for different analyses, as needed.

Performance Band Report (by Student):

This report provides a quick overview of individual to student performance, based upon the assigned set of categories.

(Sample reports with descriptions are supplied as a separate attachment.)

Technical Quality

All item-bank statistics, analyses, and procedures used to illustrate the concepts of reliability and validity as they relate to Performance Series were reviewed for completeness and accuracy by a statistical team.

(Please refer to Technical Report for full outcomes report.)

Reference:

- Performance Series Technical Report – Accessible electronically in the Documents tab in Performance Series
- Performance Series' Scores – Accessible in the Performance Series Reports tab
- Scantron website – www.Scantron.com
- Achievement Series User Guide – Accessible electronically in the Documents tab in Achievement Series

Table A: Scantron Performance Series Cut Scores for CDE Requests to Reconsider

READING FOUNDATIONS			
	Fall	Spring	Scaled Score Growth (Fall to Spring)
Grade	50th Percentile Scaled Score	50th Percentile Scaled Score	50th Percentile Gain
K	1415	1756	324.87
1	1675	1995	307.61
2	1946	2115	160.42
READING			
	Fall	Spring	Scaled Score Growth (Fall to Spring)
Grade	50th Percentile Scaled Score	50th Percentile Scaled Score	50th Percentile Gain
2	2009	2313	287.94
3	2300	2517	208.97
4	2518	2677	152.47
5	2677	2797	119.48
6	2791	2882	96.59
7	2886	2953	69.58
8	2947	3018	70.05
9	2973	3023	31.20
10	3005	3047	34.32
11	3028	3067	18.86

LANGUAGE ARTS			
	Fall	Spring	Scaled Score Growth (Fall to Spring)
Grade	50th Percentile Scaled Score	50th Percentile Scaled Score	50th Percentile Gain
2	2047	2266	231.90
3	2286	2406	107.82
4	2375	2485	93.73
5	2470	2556	73.15
6	2544	2604	59.95
7	2590	2636	39.59
8	2610	2646	23.00
MATHEMATICS			
	Fall	Spring	Scaled Score Growth (Fall to Spring)
Grade	50th Percentile Scaled Score	50th Percentile Scaled Score	50th Percentile Gain
2	2040	2257	207.53
3	2243	2395	164.22
4	2370	2501	127.60
5	2474	2588	110.76
6	2561	2666	103.17
7	2641	2742	96.74
8	2702	2787	82.25
9	2720	2788	64.44
10	2715	2780	59.76
LIFE SCIENCE AND INQUIRY			
	Fall	Spring	Scaled Score Growth (Fall to Spring)

Grade	50th Percentile Scaled Score	50th Percentile Scaled Score	50th Percentile Gain
2	2137	2324	221.38
3	2332	2448	120.44
4	2437	2522	79.65
5	2519	2596	63.72
6	2584	2650	63.26
7	2639	2708	56.62
8	2674	2718	30.23