

Predicting Proficiency on the New Jersey State Learning Assessment (NJSLA) based on NWEA MAP Growth Scores

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NWEA Psychometric Solutions



Linking Study Updates

Date	Description
2016-11	Initial multi-state linking study conducted for PARCC using Spring 2016 data for Mathematics and ELA in Grades 3–8.
2020-01-31	Updated the report to reflect the new NWEA branding.
2023-05-22	Updated results for Mathematics & ELA in Grades 3–8 and for Science in Grades 5 & 8 using Spring 2022 data.

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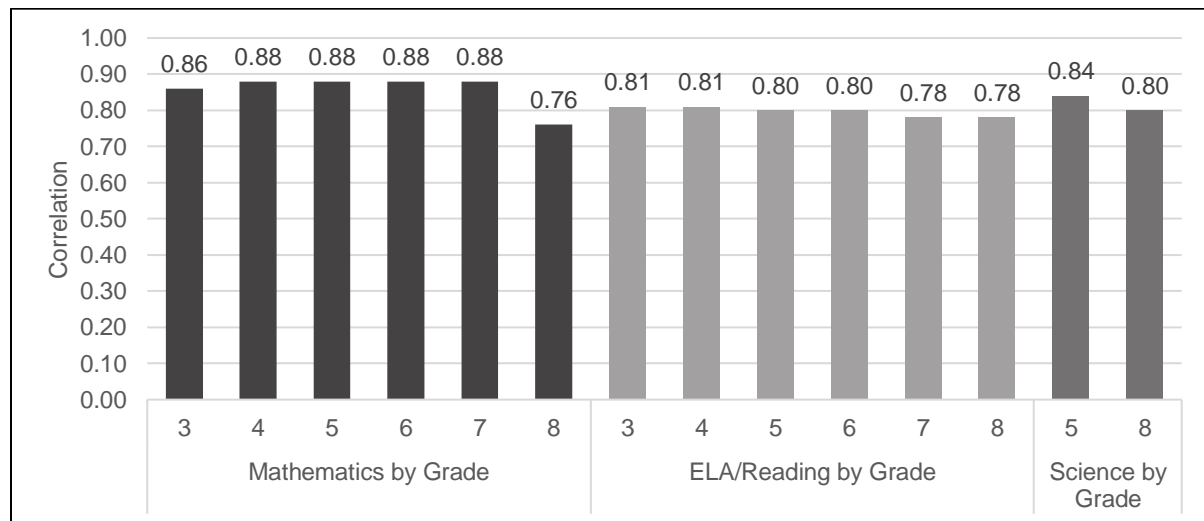
Executive Summary

Linking studies allow partners to use MAP® Growth™ Rasch Unit (RIT) scores throughout the year to predict their students' likely performance levels on the state summative assessment. This is accomplished through statistical analyses that produce RIT cut scores that correspond to the state summative performance levels. A *cut score* is the minimum score a student must get on a test to be placed in a certain performance level. The linking study for the New Jersey State Learning Assessment (NJSLA) described in this report provides RIT cut scores for the fall, winter, and spring MAP Growth administrations that correspond to the NJSLA performance levels for Mathematics and English Language Arts (ELA) in Grades 3–8 and for Science in Grades 5 & 8.

The linking study is based on test scores from students who took both the MAP Growth and NJSLA in Mathematics, ELA/Reading, and Science in Spring 2022 for the targeted grades. The linking study sample included 26,398 students across 12 districts and 76 schools in New Jersey. Scores from both tests were used as the basis for linking the two assessments together.

Before the linking analyses began, NWEA confirmed that the MAP Growth and NJSLA assessments are aligned to the same or similar set of content standards to warrant a connection. The link between the two tests was further investigated by calculating the Pearson correlation coefficients that describe the relationship between the specific MAP Growth and NJSLA scores. At NWEA, we consider a correlation of $r \geq 0.70$ as “high” correlation and acceptable for publishing. This indicates that students who perform well on one assessment also tend to perform well on the other, and vice versa. A perfect positive correlation is 1.00. The correlations between the MAP Growth and NJSLA test scores from Spring 2022, shown below, are consistent with our expectations that MAP Growth is a good assessment for predicting performance on the NJSLA.

Figure E.1. Correlations between MAP Growth and NJSLA Scores by Grade



The equipercentile linking method and the 2020 MAP Growth norms (Thum & Kuhfeld, 2020) were then used to produce the RIT cut scores that correspond to performance on the NJSLA test for every subject and grade. While RIT cut scores were generated for every performance level on the NJSLA, Table E.1 presents the cut scores that indicate the minimum score a student must get to be considered proficient (reaching *Level 4* or higher for Mathematics and ELA/Reading, and *Level 3* or higher for Science).

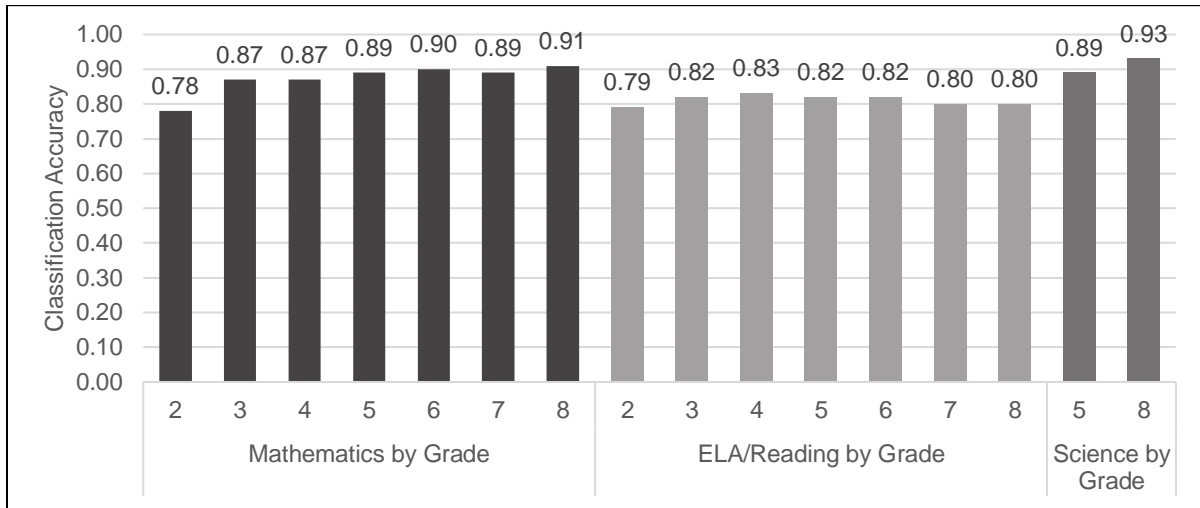
Table E.1. MAP Growth RIT Cut Scores for NJSLA Proficiency

Assessment		Cut Scores by Grade						
		2	3	4	5	6	7	8
Mathematics								
NJSLA Spring		–	750	750	750	750	750	750
MAP Growth Mathematics	Fall	178	190	203	214	221	227	236
	Winter	187	198	210	220	226	231	239
	Spring	192	203	214	224	229	234	241
ELA/Reading								
NJSLA Spring		–	750	750	750	750	750	750
MAP Growth Reading	Fall	177	191	199	204	211	213	217
	Winter	186	198	205	209	214	216	220
	Spring	190	201	207	211	216	217	221
Science								
NJSLA Spring		–	–	–	200	–	–	200
MAP Growth Science	Fall	–	–	–	207	–	–	227
	Winter	–	–	–	211	–	–	228
	Spring	–	–	–	212	–	–	229

Educators can use these cut scores to determine whether students are on track for proficiency on the state assessment. For example, the *Level 4* cut score on the Grade 3 NJSLA Mathematics test is 750. A Grade 3 student with a MAP Growth Mathematics RIT score of 190 in the fall is likely to meet expectations on the NJSLA Mathematics test in the spring, whereas a Grade 3 student with a RIT score lower than 190 in the fall is in jeopardy of not meeting proficiency. MAP Growth cut scores for Grade 2 are also provided so educators can track early learners' progress toward expectations on the NJSLA by Grade 3.

As further evidence that MAP Growth scores can be used to predict students' proficiency (*Level 4* or higher for Mathematics/Reading and *Level 3* or higher for Science) on the state test, NWEA calculated classification accuracy statistics that show how well the RIT scores can correctly classify, or predict, students as proficient on the state tests. For example, the Grade 3 MAP Growth Mathematics cut score correctly classified students' proficiency (*Level 4* or higher) on the NJSLA Mathematics test 87% of the time. A high statistic indicates high accuracy. Overall, MAP Growth scores have a high accuracy rate of identifying student proficiency on the NJSLA tests, as illustrated below.

Figure E.2. Accuracy of MAP Growth Classifications by Grade



Please note that the purpose of this report is to explain NWEA’s linking study methodology. It is not meant as the main reference for determining a student’s likely performance on the state summative assessment. The cut scores in this report are based on the default instructional weeks most encountered for each term (i.e., Weeks 4, 20, and 32 for fall, winter, and spring), whereas instructional weeks often vary by district. The cut scores in this report may therefore differ from the results in the NWEA reporting system that reflect the specific instructional weeks set by partners. Partners should therefore reference their MAP Growth score reports instead.

1. Introduction

1.1. Purpose of the Study

NWEA® is committed to providing partners with useful tools to help make inferences about student learning from MAP® Growth™ test scores. One important use of MAP Growth results is to predict a student's performance on the state summative assessment at different times throughout the year. This allows educators and parents to determine if a student is on track in their learning to meet state standards by the end of the year or, given a student's learning profile, is on track to obtain rigorous, realistic growth in their content knowledge and skills.

This document presents results from a linking study conducted by NWEA to statistically connect Rasch Unit (RIT) scores from the MAP Growth assessments with scores from the New Jersey State Learning Assessment (NJSLA) Mathematics and English Language Arts (ELA)/Reading in Grades 3–8 and Science in Grades 5 and 8 taken during the Spring 2022 term.¹ MAP Growth cut scores are also included for Grade 2 so educators can track early learners' progress toward proficiency on the NJSLA test by Grade 3. Specifically, this report presents the following results:

1. Student sample demographics
2. Descriptive statistics of test scores
3. MAP Growth cut scores from fall, winter, and spring that correspond to the performance levels on the spring NJSLA
4. Classification accuracy statistics to determine the degree to which MAP Growth accurately predicts student proficiency status on the NJSLA tests
5. The probability of achieving grade-level proficiency on the NJSLA based on MAP Growth RIT scores from fall, winter, and spring

1.2. Assessment Overview

The NJSLA Grades 3–8 Mathematics and ELA/Reading and Grades 5 and 8 Science tests are New Jersey's state summative assessments aligned to the New Jersey Student Learning Standards. Based on their test scores, students are placed into one of five performance levels for Mathematics and ELA: *Level 1 (Did Not Yet Meet Expectations)*, *Level 2 (Partially Met Expectations)*, *Level 3 (Approached Expectations)*, *Level 4 (Met Expectations)*, and *Level 5 (Exceeded Expectations)* and four performance levels for Science: *Level 1 (Below Proficiency)*, *Level 2 (Near Proficiency)*, *Level 3 (Proficient)*, and *Level 4 (Advanced Proficient)*. The *Level 4* cut scores for Mathematics and ELA/Reading and *Level 3* cut scores for Science demark the minimum level of achievement considered to be proficient for accountability purposes.

MAP Growth tests are adaptive interim assessments aligned to state-specific content standards and administered in the fall, winter, and spring. Scores are reported on the RIT vertical scale with a range of 100 to 350. NWEA conducts norming studies of student and school performance on MAP Growth assessments to aid the interpretation of scores. Growth norms provide expected score gains for a test from term to term, such as from fall to spring terms. The most recent norms study was conducted in 2020 (Thum & Kuhfeld, 2020).

¹ This study provides MAP Growth cut scores that predict proficiency on the NJSLA for Grades 2–8 only. They represent a higher level of achievement than universal screening cut scores designed to identify students with the most severe learning difficulties who may need intensive intervention. MAP Growth universal screening cut scores for Grades K–8 in Mathematics and Reading are available in a separate report (He & Meyer, 2021).

2. Methods

2.1. Data Collection

This linking study is based on data from the Spring 2022 administrations of the MAP Growth and NJSLA. NWEA recruited New Jersey districts to participate in the study by sharing their student and score data for the target term. Districts also gave NWEA permission to use their students' MAP Growth scores from the NWEA in-house database. Once state score information was received by NWEA, each student's state testing record was matched to their MAP Growth score based on the student's first and last names, date of birth, student ID, and other available identifying information. Only students who took both the MAP Growth and NJSLA in Spring 2022 were included in the study sample.

2.2. Post-Stratification Weighting

Post-stratification weights were applied to the calculations to ensure that the linking study sample represented the state's test-taking student population in terms of race, sex, and performance level. These variables were selected because they are known to be correlated with students' academic achievement and are often available in state summative assessment reports. The weighted sample will match the target population as closely as possible on the key demographics and performance characteristics as defined by the state.

A raking procedure was used to calculate the post-stratification weights that either compensate for the underrepresentation of certain groups or attenuate the overrepresentation of certain groups. Raking uses iterative procedures to obtain weights that match sample marginal distributions to known population margins. The following steps were taken during this process:

1. Calculate marginal distributions of race, sex, and performance level for the sample and population.
2. Calculate post-stratification weights with the rake function from the survey package in R (Lumley, 2019).
3. Trim the weights that are outside the range of 0.3 to 3.0.
4. Apply the weights to the sample before conducting the linking study analyses.

2.3. Descriptive Statistics

Descriptive statistics are provided to summarize the test scores for both the MAP Growth and NJSLA, including the test score mean, standard deviation (SD), minimum, and maximum. The mean presents the average test scores across all students in the study sample, and the SD indicates the variability of test scores, revealing how students' scores are distributed around the average score, or mean. Correlation coefficients between the MAP Growth RIT scores and NJLSA scores are also provided to answer the question, "How well do the test scores from MAP Growth that reference the RIT scale correlate to the scores obtained from the NJLSA test that references some other scale in the same subject?" The correlations were calculated as follows:

$$r = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2 \sum (y_i - \bar{y})^2}} \quad (1)$$

where r is the correlation coefficient, x_i and y_i are the values of the x- and y-variables in a sample, and \bar{x} and \bar{y} are the mean of the values of the x- and y-variables.

2.4. MAP Growth Cut Scores

MAP Growth cut scores that predict student achievement on the NJSLA assessments are reported for Grades 3–8, as well as for Grade 2 so educators can track early learners' progress toward proficiency on the NJSLA test by Grade 3. Percentile ranks based on the 2020 NWEA norms are also provided. These are useful for understanding how students' scores compare to peers nationwide and the relative rigor of a state's performance level designations for its summative assessment.

The equipercentile linking method (Kolen & Brennan, 2004) was used to identify the spring MAP Growth RIT scores for Grades 3–8 that correspond to the spring NJSLA performance level cut scores. The equipercentile linking procedure matches scores on the two scales that have the same percentile rank (i.e., the proportion of tests at or below each score). For example, let x represent a score on Test X (e.g., NJSLA). Its equipercentile equivalent score on Test Y (e.g., MAP Growth), $e_y(x)$, can be obtained through a cumulative-distribution-based linking function defined in Equation 2:

$$e_y(x) = G^{-1}[P(x)] \quad (2)$$

where $e_y(x)$ is the equipercentile equivalent of score x on NJSLA on the scale of MAP Growth, $P(x)$ is the percentile rank of a given score on NJSLA, and G^{-1} is the inverse of the percentile rank function for MAP Growth that indicates the score on MAP Growth corresponding to a given percentile. Polynomial loglinear pre-smoothing was applied to reduce irregularities of the score distributions and equipercentile linking curve.

The MAP Growth conditional growth norms provide students' expected score gains across terms, such as growth from fall to spring within the same grade or from spring of a lower grade to spring of the adjacent higher grade. This information was used to calculate the fall and winter cut scores for Grades 3–8. Equation 3 was used to determine the previous term's MAP Growth score needed to reach the spring cut score, considering the expected growth associated with the previous RIT score:

$$RIT_{PredSpring} = RIT_{previous} + g \quad (3)$$

where:

- $RIT_{PredSpring}$ is the predicted MAP Growth spring score.
- $RIT_{previous}$ is the previous term's RIT score.
- g is the expected growth from the previous RIT (e.g., fall or winter) to the spring RIT score.

Students do not take the NJSLA in Grade 2. Therefore, the MAP Growth conditional growth norms were also used to estimate the fall, winter, and spring cuts in Grade 2 that are needed to meet NJSLA proficiency in Grade 3. To derive the Grade 2 spring cut scores, the growth score from spring of one year to the next was used (i.e., the growth score from spring of Grade 2 to spring of Grade 3). The estimations of fall and winter cuts followed the same process as above for Grades 3–8. For example, the projected growth from fall to spring in Grade 2 was used to calculate the fall cuts for Grade 2.

2.5. Classification Accuracy

The degree to which MAP Growth predicts student proficiency status on the NJSLA tests can be described using classification accuracy statistics based on the MAP Growth spring RIT cut scores. The results show the proportion of students correctly classified by their RIT scores as proficient or not proficient on the NJSLA test. The classification accuracy statistics for Grade 2 were calculated by obtaining current Grade 3 students' MAP Growth scores from the previous year. Thus, the classification accuracy statistics for Grade 2 represent how well these estimated RIT cuts predict proficiency in the NJSLA tests in Grades 3 for our study sample. Table 2.1 describes the classification accuracy statistics provided in this report (Pommerich et al., 2004).

Table 2.1. Description of Classification Accuracy Summary Statistics

Statistic	Description*	Interpretation
Overall Classification Accuracy Rate	$(TP + TN) / (\text{total sample size})$	Proportion of the study sample whose proficiency classification on the state test was correctly predicted by MAP Growth cut scores
False Negative (FN) Rate	$FN / (FN + TP)$	Proportion of not-proficient students identified by MAP Growth in those observed as proficient on the state test
False Positive (FP) Rate	$FP / (FP + TN)$	Proportion of proficient students identified by MAP Growth in those observed as not proficient on the state test
Sensitivity	$TP / (TP + FN)$	Proportion of proficient students identified by MAP Growth in those observed as such on the state test
Specificity	$TN / (TN + FP)$	Proportion of not-proficient students identified by MAP Growth in those observed as such on the state test
Precision	$TP / (TP + FP)$	Proportion of observed proficient students on the state test in those identified as such by the MAP Growth test
Area Under the Curve (AUC)	Area under the receiver operating characteristics (ROC) curve	How well MAP Growth cut scores separate the study sample into proficiency categories that match those from the state test cut scores. An AUC at or above 0.80 is considered "good" accuracy.

*FP = false positives. FN = false negatives. TP = true positives. TN = true negatives.

2.6. Proficiency Projections

Given that all test scores contain measurement errors, reaching the accountability RIT cut does not guarantee that the student is proficient at the state test. Instead, we can claim that a student with the RIT cut score has a 50% chance of reaching proficiency on the state test, with their chances increasing the greater their score is from the cut. The proficiency projections indicate these probabilities for various RIT scores throughout the year.

In addition to calculating the MAP Growth fall and winter cut scores (and the projected Grade 2 cut scores), the MAP Growth conditional growth norms data were also used to calculate the probability of reaching proficiency on the NJSLA test in the spring based on a student's RIT scores from fall and winter (see Equation 4).

$$Pr(\text{Achieving proficiency in spring} | \text{starting RIT}) = \Phi \left(\frac{RIT_{previous} + g - RIT_{SpringCut}}{SD} \right) \quad (4)$$

where:

- Φ is the standard normal cumulative distribution function.
- $RIT_{previous}$ is the student's RIT score in fall or winter (or in spring of Grade 2).
- g is the expected growth from the previous RIT (e.g., fall or winter) to the spring RIT.
- $RIT_{SpringCut}$ is the MAP Growth cut score associated with state proficiency in spring. For Grade 2, this is the Grade 3 cut score for spring.
- SD is the conditional standard deviation of the expected growth, g .

Equation 5 was used to estimate the probability of a student achieving *Level 3* performance for Science and *Level 4* performance for Mathematics and ELA/Reading on the NJSLA test based on their spring RIT score (RIT_{Spring}):

$$Pr(\text{Achieving proficiency in spring} \mid \text{spring RIT}) = \Phi\left(\frac{RIT_{Spring} - RIT_{SpringCut}}{SE}\right) \quad (5)$$

where SE is the standard error of measurement for MAP Growth.

3. Results

3.1. Study Sample

Only students who took both the MAP Growth and NJSLA tests in Spring 2022 for the target subjects were included in the sample. Data were collected from 12 districts and 76 schools in New Jersey. Table 3.1 presents the distributions of student race, sex, and performance level in the original unweighted study sample. Table 3.2 presents the distributions of the target population of students who took the NJSLA tests. Since the original study sample is different from the target NJSLA population, post-stratification weights were applied. Table 3.3 presents the demographic distributions of the final analytic sample after weighting, which are almost identical to the NJSLA student population distributions.

Table 3.1. Linking Study Sample Demographics (Unweighted)

Linking Study Sample (Unweighted)							
Demographic Subgroup		%Students by Grade					
		3	4	5	6	7	8
Mathematics							
Total N		3,863	4,031	3,915	3,988	4,619	4,495
Race*	African American	26.3	26.3	25.0	26.4	24.9	27.2
	American Indian	0.3	0.2	0.2	0.2	0.2	0.2
	Asian	1.4	1.2	1.3	1.5	1.4	1.5
	Hispanic	53.1	53.9	54.2	54.8	49.8	49.4
	NHPI	0.3	0.4	0.2	0.2	0.2	0.2
	Other	1.9	1.7	1.5	1.3	1.2	1.1
	White	16.7	16.3	17.7	15.6	22.4	20.4
Sex	Female	49.5	50.5	50.7	49.2	48.3	49.0
	Male	50.5	49.5	49.3	50.8	51.7	51.0
Performance Level	Level 1	26.4	26.8	28.1	25.3	16.6	34.8
	Level 2	28.7	33.8	33.2	33.8	31.8	30.8
	Level 3	23.2	22.8	23.5	26.6	31.5	19.6
	Level 4	18.5	15.4	13.6	13.0	17.8	14.0
	Level 5	3.3	1.2	1.5	1.3	2.2	0.8
ELA/Reading							
Total N		3,812	3,988	3,851	3,886	4,620	4,884
Race*	African American	26.4	26.7	25.2	26.6	24.5	26.6
	American Indian	0.3	0.2	0.2	0.2	0.2	0.3
	Asian	1.4	1.2	1.2	1.5	1.5	1.7
	Hispanic	53.9	54.1	54.6	55.1	50.7	48.3
	NHPI	0.3	0.4	0.2	0.2	0.2	0.2
	Other	1.9	1.7	1.6	1.4	1.1	1.1
	White	15.8	15.7	17.0	15.1	21.9	21.9
Sex	Female	49.5	50.2	50.8	48.9	48.3	49.4
	Male	50.5	49.8	49.2	51.1	51.7	50.6

Linking Study Sample (Unweighted)							
Demographic Subgroup		%Students by Grade					
		3	4	5	6	7	8
Performance Level	Level 1	35.9	29.1	24.4	17.2	18.1	21.0
	Level 2	20.4	21.5	21.7	22.2	18.6	18.5
	Level 3	20.5	23.1	24.8	29.6	25.9	24.3
	Level 4	21.1	22.5	26.0	26.6	28.1	30.0
	Level 5	2.1	3.8	3.1	4.4	9.3	6.2
Science							
Total N		–	–	3,513	–	–	3,948
Race*	African American	–	–	25.3	–	–	29.4
	American Indian	–	–	0.1	–	–	0.2
	Asian	–	–	1.0	–	–	0.7
	Hispanic	–	–	66.9	–	–	63.2
	NHPI	–	–	0.1	–	–	0.2
	Other	–	–	0.1	–	–	0.0
	White	–	–	6.3	–	–	6.3
Sex	Female	–	–	51.0	–	–	50.0
	Male	–	–	49.0	–	–	50.0
Performance Level	Level 1	–	–	68.0	–	–	62.9
	Level 2	–	–	24.5	–	–	33.5
	Level 3	–	–	5.9	–	–	3.3
	Level 4	–	–	1.5	–	–	0.3

*NHPI = Native Hawaiian or Other Pacific Islander.

Table 3.2. Spring 2022 NJSLA Student Population Demographics

Spring 2022 NJSLA Student Population							
Demographic Subgroup		%Students by Grade					
		3	4	5	6	7	8
Mathematics							
Total N		93,502	94,953	96,601	97,548	95,341	66,241
Race*	African American	14.3	14.9	14.4	14.7	15.5	18.1
	American Indian	0.2	0.2	0.2	0.2	0.1	0.2
	Asian	10.8	11.1	10.8	10.8	8.6	5.0
	Hispanic	33.0	32.3	32.3	31.8	32.8	36.7
	NHPI	0.2	0.2	0.2	0.2	0.2	0.2
	Other	3.4	3.2	2.9	2.9	2.6	2.2
	White	38.2	38.2	39.1	39.5	40.3	37.6
Sex	Female	49.3	49.1	49.0	48.9	48.6	47.8
	Male	50.7	50.9	51.0	51.1	51.4	52.2

Spring 2022 NJSLA Student Population							
Demographic Subgroup		%Students by Grade					
		3	4	5	6	7	8
Performance Level	<i>Level 1</i>	13.3	13.1	15.1	15.3	10.9	30.4
	<i>Level 2</i>	18.3	22.6	23.0	24.9	23.6	31.9
	<i>Level 3</i>	23.0	24.8	25.9	28.5	31.5	22.3
	<i>Level 4</i>	32.8	33.2	28.9	26.0	28.9	14.6
	<i>Level 5</i>	12.6	6.2	7.1	5.3	5.1	0.8
ELA							
Total N		92,131	93,632	95,314	96,334	99,427	100,781
Race*	African American	14.5	15.0	14.6	14.9	15.1	15.1
	American Indian	0.2	0.2	0.2	0.2	0.1	0.1
	Asian	10.8	11.1	10.9	10.8	10.6	10.7
	Hispanic	32.3	31.7	31.7	31.1	31.0	30.7
	NHPI	0.2	0.2	0.2	0.2	0.2	0.2
	Other	3.4	3.2	3.0	2.9	2.6	2.5
	White	38.6	38.6	39.5	39.9	40.4	40.8
Sex	Female	49.3	49.1	48.9	48.9	48.5	48.7
	Male	50.7	50.9	51.1	51.1	51.5	51.3
Performance Level	<i>Level 1</i>	20.1	14.4	12.5	10.6	12.3	14.3
	<i>Level 2</i>	15.5	14.3	14.7	15.6	13.5	13.2
	<i>Level 3</i>	22.0	21.9	23.2	26.3	21.5	21.2
	<i>Level 4</i>	36.2	35.3	40.4	37.4	31.4	35.8
	<i>Level 5</i>	6.2	14.1	9.2	10.2	21.3	15.6
Science							
Total N		–	–	96,288	–	–	101,371
Race*	African American	–	–	14.4	–	–	14.8
	American Indian	–	–	0.2	–	–	0.1
	Asian	–	–	10.8	–	–	10.6
	Hispanic	–	–	32.4	–	–	31.4
	NHPI	–	–	0.2	–	–	0.2
	Other	–	–	2.9	–	–	2.4
	White	–	–	39.1	–	–	40.4
Sex	Female	–	–	49.0	–	–	48.8
	Male	–	–	51.0	–	–	51.2
Performance Level	<i>Level 1</i>	–	–	41.6	–	–	40.9
	<i>Level 2</i>	–	–	32.9	–	–	43.5
	<i>Level 3</i>	–	–	18.2	–	–	12.0
	<i>Level 4</i>	–	–	7.4	–	–	3.6

*NHPI = Native Hawaiian or Other Pacific Islander.

Table 3.3. Linking Study Sample Demographics (Weighted)

Linking Study Sample (Weighted)							
Demographic Subgroup		%Students by Grade					
		3	4	5	6	7	8
Mathematics							
Total N		3,863	4,027	3,915	3,988	4,619	4,495
Race*	African American	14.3	14.8	14.4	14.7	15.5	18.1
	American Indian	0.2	0.2	0.2	0.2	0.1	0.2
	Asian	10.8	11.1	10.8	10.8	8.6	5.0
	Hispanic	33.0	32.3	32.3	31.8	32.8	36.7
	NHPI	0.2	0.2	0.2	0.2	0.2	0.2
	Other	3.4	3.2	2.9	2.9	2.6	2.2
	White	38.2	38.2	39.1	39.5	40.3	37.6
Sex	Female	49.3	49.1	49.0	48.9	48.6	47.8
	Male	50.7	50.9	51.0	51.1	51.4	52.2
Performance Level	Level 1	13.3	13.1	15.1	15.3	10.9	30.4
	Level 2	18.3	22.6	23.0	24.9	23.6	31.9
	Level 3	23.0	24.8	25.9	28.5	31.5	22.3
	Level 4	32.8	33.2	28.9	26.0	28.9	14.6
	Level 5	12.6	6.2	7.1	5.3	5.1	0.8
ELA/Reading							
Total N		3,812	3,988	3,851	3,890	4,620	4,889
Race*	African American	14.5	15.0	14.6	14.9	15.1	15.1
	American Indian	0.2	0.2	0.2	0.2	0.1	0.1
	Asian	10.8	11.1	10.9	10.8	10.6	10.7
	Hispanic	32.3	31.7	31.7	31.1	31.0	30.7
	NHPI	0.2	0.2	0.2	0.2	0.2	0.2
	Other	3.4	3.2	3.0	2.9	2.6	2.5
	White	38.6	38.6	39.5	39.9	40.4	40.8
Sex	Female	49.3	49.1	48.9	48.9	48.5	48.7
	Male	50.7	50.9	51.1	51.1	51.5	51.3
Performance Level	Level 1	20.1	14.4	12.5	10.6	12.3	14.3
	Level 2	15.5	14.3	14.7	15.6	13.5	13.2
	Level 3	22.0	21.9	23.2	26.3	21.5	21.2
	Level 4	36.2	35.3	40.4	37.4	31.4	35.8
	Level 5	6.2	14.1	9.2	10.2	21.3	15.6
Science							
Total N		–	–	3,517	–	–	3,948
Race*	African American	–	–	14.4	–	–	14.8
	American Indian	–	–	0.2	–	–	0.1
	Asian	–	–	10.8	–	–	10.6
	Hispanic	–	–	32.4	–	–	31.4
	NHPI	–	–	0.2	–	–	0.2
	Other	–	–	2.9	–	–	2.4

Linking Study Sample (Weighted)							
Demographic Subgroup		%Students by Grade					
		3	4	5	6	7	8
Sex	White	–	–	39.1	–	–	40.4
	Female	–	–	49.0	–	–	48.8
	Male	–	–	51.0	–	–	51.2
Performance Level	Level 1	–	–	41.6	–	–	40.9
	Level 2	–	–	32.9	–	–	43.5
	Level 3	–	–	18.2	–	–	12.0
	Level 4	–	–	7.4	–	–	3.6

*NHPI = Native Hawaiian or Other Pacific Islander.

3.2. Descriptive Statistics

Table 3.4 presents descriptive statistics of the MAP Growth and NJSLA test scores from Spring 2022, including the correlation coefficient (r) between them. The correlations between the scores range from 0.76 to 0.88 for Mathematics, 0.78 to 0.81 for ELA/Reading, and 0.80 to 0.84 for Science. These values indicate a high positive correlation among the scores, which is important validity evidence for the claim that MAP Growth scores are good predictors of performance on the NJSLA.

Table 3.4. Descriptive Statistics of Test Scores

Grade	N	r	NJSLA*				MAP Growth*			
			Mean	SD	Min.	Max.	Mean	SD	Min.	Max.
Mathematics										
3	3,863	0.86	743.8	39.4	650	850	199.5	16.4	129	247
4	4,027	0.88	738.2	34.6	650	836	207.4	17.3	139	256
5	3,915	0.88	734.8	34.6	650	836	215.2	19.6	128	271
6	3,988	0.88	732.6	33.2	650	850	219.4	18.0	152	266
7	4,619	0.88	736.8	29.4	650	845	224.0	19.2	155	276
8	4,495	0.76	716.2	32.9	650	850	221.5	19.2	143	280
ELA/Reading										
3	3,812	0.81	738.4	44.9	650	850	195.4	17.2	139	240
4	3,988	0.81	744.5	37.9	650	842	203.8	17.0	144	241
5	3,851	0.80	746.4	37.2	650	850	208.6	16.7	144	248
6	3,890	0.80	745.0	34.7	650	850	212.5	16.6	156	264
7	4,620	0.78	748.8	40.2	650	850	216.3	17.6	149	256
8	4,889	0.78	748.5	42.8	650	850	218.7	18.0	158	259
Science										
5	3,517	0.84	160.4	49.0	100	300	202.2	15.6	152	245
8	3,948	0.80	158.3	33.1	100	274	209.4	16.0	161	247

*SD = standard deviation. Min. = minimum. Max. = maximum.

3.3. MAP Growth Cut Scores

Table 3.5, Table 3.6, and Table 3.7 present the NJSLA scale score ranges and the corresponding MAP Growth RIT cut scores and percentile ranges by content area and grade. Bolded numbers highlight the cut scores considered to be proficient for accountability purposes. These tables can be used to gauge a student's likely performance level on the NJSLA spring test when MAP Growth is taken in the fall, winter, or spring. For example, a Grade 3 student who obtained a MAP Growth Mathematics RIT score of 190 in the fall is likely to achieve *Level 4* performance on the NJSLA Mathematics test. The same is true for a Grade 3 student who obtained a MAP Growth Mathematics RIT score of 203 in the spring. The spring cut score is higher than the fall cut score because of expected growth during the school year as students receive more instruction.

Within this report, the cut scores for fall and winter are derived from the spring cuts and the typical growth scores from fall-to-spring or winter-to-spring. The typical growth scores are based on the default instructional weeks most encountered for each term (Weeks 4, 20, and 32 for fall, winter, and spring, respectively). Since instructional weeks often vary by district, the cut scores in this report may differ slightly from the MAP Growth score reports that reflect instructional weeks set by partners. If the actual instructional weeks deviate substantially from the default ones, a student's expected performance level could be different from the projections presented in this report. Partners are therefore encouraged to use the projected performance level in students' score reports since they reflect the specific instructional weeks set by partners.

Table 3.5. MAP Growth Cut Scores—Mathematics

NJSLA Mathematics										
Grade	Level 1		Level 2		Level 3		Level 4		Level 5	
3	650–699		700–724		725–749		750–789		790–850	
4	650–699		700–724		725–749		750–795		796–850	
5	650–699		700–724		725–749		750–789		790–850	
6	650–699		700–724		725–749		750–787		788–850	
7	650–699		700–724		725–749		750–785		786–850	
8	650–699		700–724		725–749		750–800		801–850	
MAP Growth Mathematics										
Grade	Level 1		Level 2		Level 3		Level 4		Level 5	
	RIT	Percentile	RIT	Percentile	RIT	Percentile	RIT	Percentile	RIT	Percentile
Fall										
2	100–153	1–4	154–166	5–26	167–177	27–58	178–193	59–92	194–350	93–99
3	100–168	1–6	169–180	7–28	181–189	29–54	190–204	55–88	205–350	89–99
4	100–177	1–6	178–190	7–27	191–202	28–58	203–222	59–94	223–350	95–99
5	100–186	1–6	187–200	7–29	201–213	30–62	214–234	63–95	235–350	96–99
6	100–193	1–9	194–207	10–33	208–220	34–64	221–239	65–93	240–350	94–99
7	100–196	1–8	197–210	9–29	211–226	30–64	227–246	65–93	247–350	94–99
8	100–207	1–18	208–222	19–45	223–235	46–71	236–259	72–96	260–350	97–99
Winter										
2	100–163	1–5	164–175	6–26	176–186	27–58	187–201	59–91	202–350	92–99
3	100–177	1–8	178–188	9–29	189–197	30–54	198–212	55–88	213–350	89–99
4	100–183	1–6	184–197	7–28	198–209	29–59	210–229	60–94	230–350	95–99
5	100–191	1–7	192–206	8–30	207–219	31–62	220–240	63–94	241–350	95–99
6	100–198	1–10	199–212	11–34	213–225	35–64	226–244	65–93	245–350	94–99
7	100–199	1–8	200–213	9–28	214–230	29–64	231–250	65–92	251–350	93–99
8	100–211	1–19	212–225	20–45	226–238	46–70	239–262	71–95	263–350	96–99
Spring										
2	100–169	1–6	170–181	7–28	182–191	29–57	192–206	58–89	207–350	90–99
3	100–182	1–9	183–193	10–30	194–202	31–54	203–216	55–86	217–350	87–99
4	100–188	1–7	189–201	8–28	202–213	29–58	214–233	59–92	234–350	93–99
5	100–195	1–8	196–210	9–31	211–223	32–61	224–244	62–93	245–350	94–99
6	100–201	1–11	202–215	12–34	216–228	35–63	229–247	64–91	248–350	92–99
7	100–202	1–9	203–216	10–29	217–233	30–64	234–253	65–92	254–350	93–99
8	100–213	1–20	214–227	21–44	228–240	45–69	241–264	70–95	265–350	96–99

Table 3.6. MAP Growth Cut Scores—ELA/Reading

NJSLA ELA/Reading										
Grade	Level 1		Level 2		Level 3		Level 4		Level 5	
3	650–699		700–724		725–749		750–809		810–850	
4	650–699		700–724		725–749		750–789		790–850	
5	650–699		700–724		725–749		750–798		799–850	
6	650–699		700–724		725–749		750–789		790–850	
7	650–699		700–724		725–749		750–784		785–850	
8	650–699		700–724		725–749		750–793		794–850	
MAP Growth Reading										
Grade	Level 1		Level 2		Level 3		Level 4		Level 5	
	RIT	Percentile	RIT	Percentile	RIT	Percentile	RIT	Percentile	RIT	Percentile
Fall										
2	100–154	1–12	155–166	13–35	167–176	36–61	177–202	62–97	203–350	98–99
3	100–170	1–16	171–181	17–38	182–190	39–59	191–212	60–93	213–350	94–99
4	100–174	1–9	175–185	10–25	186–198	26–55	199–216	56–88	217–350	89–99
5	100–178	1–5	179–192	6–23	193–203	24–48	204–225	49–90	226–350	91–99
6	100–181	1–3	182–196	4–20	197–210	21–51	211–228	52–86	229–350	87–99
7	100–189	1–6	190–200	7–20	201–212	21–46	213–229	47–82	230–350	83–99
8	100–194	1–8	195–205	9–23	206–216	24–47	217–233	48–82	234–350	83–99
Winter										
2	100–164	1–13	165–175	14–35	176–185	36–62	186–209	63–96	210–350	97–99
3	100–179	1–18	180–189	19–39	190–197	40–59	198–217	60–92	218–350	93–99
4	100–182	1–11	183–192	12–27	193–204	28–55	205–221	56–87	222–350	88–99
5	100–185	1–6	186–198	7–25	199–208	26–49	209–228	50–88	229–350	89–99
6	100–187	1–4	188–201	5–22	202–213	23–49	214–230	50–85	231–350	86–99
7	100–194	1–8	195–204	9–22	205–215	23–46	216–231	47–81	232–350	82–99
8	100–198	1–9	199–208	10–24	209–219	25–48	220–234	49–80	235–350	81–99
Spring										
2	100–169	1–15	170–180	16–37	181–189	38–60	190–212	61–95	213–350	96–99
3	100–183	1–20	184–192	21–39	193–200	40–58	201–219	59–91	220–350	92–99
4	100–185	1–11	186–195	12–28	196–206	29–54	207–222	55–86	223–350	87–99
5	100–188	1–7	189–200	8–26	201–210	27–49	211–229	50–87	230–350	88–99
6	100–190	1–5	191–203	6–23	204–215	24–51	216–231	52–84	232–350	85–99
7	100–196	1–9	197–206	10–23	207–216	24–46	217–232	47–80	233–350	81–99
8	100–200	1–10	201–210	11–25	211–220	26–47	221–235	48–79	236–350	80–99

Table 3.7. MAP Growth Cut Scores—Science

NJSLA Science								
Grade	Level 1		Level 2		Level 3		Level 4	
5	100–149		150–199		200–242		243–300	
8	100–149		150–199		200–230		231–300	
MAP Growth Science								
Grade	Level 1		Level 2		Level 3		Level 4	
	RIT	Percentile	RIT	Percentile	RIT	Percentile	RIT	Percentile
Fall								
5	100–195	1–35	196–206	36–71	207–223	72–97	224–350	98–99
8	100–201	1–27	202–226	28–89	227–236	90–97	237–350	98–99
Winter								
5	100–200	1–38	201–210	39–71	211–224	72–95	225–350	96–99
8	100–205	1–30	206–227	31–87	228–237	88–96	238–350	97–99
Spring								
5	100–202	1–39	203–211	40–67	212–225	68–94	226–350	95–99
8	100–206	1–31	207–228	32–86	229–238	87–96	239–350	97–99

3.4. Classification Accuracy

Table 3.8 presents the classification accuracy summary statistics, including the overall classification accuracy rate. These results indicate how well MAP Growth spring RIT scores predict proficiency on the NJSLA tests, providing insight into the predictive validity of MAP Growth. The overall classification accuracy rate ranges from 0.78 to 0.91 for Mathematics, 0.79 to 0.83 for ELA/Reading, and 0.89 or 0.93 for Science. These values suggest that the RIT cut scores are good at classifying students as proficient or not proficient on the NJSLA test. For Grade 2, the classification accuracy rate refers to how well the MAP Growth cuts can predict students’ proficiency status on NJSLA in Grade 3.

Although the results show that MAP Growth scores can be used to predict student proficiency with relatively high accuracy on the NJSLA tests, there is a notable limitation to how these results should be used and interpreted. The NJSLA and MAP Growth assessments are designed for different purposes and measure slightly different constructs even within the same content area. Therefore, scores on the two tests cannot be assumed to be interchangeable. MAP Growth may not be used as a substitute for the state tests and vice versa.

Table 3.8. Classification Accuracy Results

Grade	N	Cut Score		Class. Accuracy*	Rate*		Sensitivity	Specificity	Precision	AUC*
		MAP Growth	NJSLA		FP	FN				
Mathematics										
2	3,293	192	750	0.78	0.16	0.43	0.57	0.84	0.52	0.81
3	3,863	203	750	0.87	0.14	0.12	0.88	0.86	0.84	0.94
4	4,027	214	750	0.87	0.10	0.18	0.82	0.90	0.85	0.95
5	3,915	224	750	0.89	0.07	0.17	0.83	0.93	0.87	0.96
6	3,988	229	750	0.90	0.08	0.14	0.86	0.92	0.82	0.96
7	4,619	234	750	0.89	0.07	0.18	0.82	0.93	0.86	0.96
8	4,495	241	750	0.91	0.05	0.29	0.71	0.95	0.71	0.95

Grade	N	Cut Score		Class. Accuracy*	Rate*		Sensitivity	Specificity	Precision	AUC*
		MAP Growth	NJSLA		FP	FN				
ELA/Reading										
2	3,209	190	750	0.79	0.13	0.45	0.55	0.87	0.58	0.83
3	3,812	201	750	0.82	0.17	0.19	0.81	0.83	0.78	0.91
4	3,988	207	750	0.83	0.17	0.17	0.83	0.83	0.82	0.91
5	3,851	211	750	0.82	0.20	0.16	0.84	0.80	0.80	0.90
6	3,890	216	750	0.82	0.18	0.19	0.81	0.82	0.80	0.90
7	4,620	217	750	0.80	0.24	0.16	0.84	0.76	0.80	0.89
8	4,889	221	750	0.80	0.21	0.19	0.81	0.79	0.80	0.89
Science										
5	3,517	212	200	0.89	0.10	0.13	0.87	0.90	0.75	0.94
8	3,948	229	200	0.93	0.02	0.32	0.68	0.98	0.84	0.96

*Class. Accuracy = overall classification accuracy rate. FP = false positives. FN = false negatives. AUC = area under the ROC curve.

3.5. Proficiency Projections

Table 3.9, Table 3.10, and Table 3.11 present the estimated probability of achieving *Level 4* performance for Mathematics and ELA/Reading and *Level 3* performance for Science on the NJSLA test based on RIT scores from fall, winter, or spring. Due to measurement error in all test scores, these accountability MAP Growth cuts do not guarantee that a student will reach proficiency on the NJSLA. They instead indicate a 50% chance that a student will reach a particular performance level. Therefore, these projections further elucidate the accountability cut scores by providing the likelihood of reaching proficiency on the NJSLA in the spring at a given percentile throughout the year.

For example, the spring Grade 3 *Level 4* RIT cut score for Mathematics is 203, which indicates a 50% chance of achieving proficiency in the spring, as shown in Table 3.9. An educator can also use the table to estimate that a Grade 3 student who obtained a MAP Growth Mathematics score of 188 in the fall has a 37% probability of reaching proficient (*Level 4* or higher) on the NJSLA test in the spring.

Table 3.9. Proficiency Projections based on RIT Scores—Mathematics

Mathematics											
Grade	Start %ile*	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Level 4	Prob.		Level 4	Prob.		Level 4	Prob.
2	5	192	154	No	<0.01	163	No	<0.01	167	No	<0.01
	10	192	158	No	<0.01	167	No	<0.01	172	No	<0.01
	15	192	162	No	0.01	171	No	<0.01	175	No	<0.01
	20	192	164	No	0.02	173	No	<0.01	178	No	<0.01
	25	192	166	No	0.04	175	No	0.01	180	No	<0.01
	30	192	168	No	0.08	177	No	0.03	182	No	<0.01
	35	192	170	No	0.14	179	No	0.07	184	No	<0.01
	40	192	172	No	0.22	181	No	0.10	186	No	0.02
	45	192	173	No	0.27	182	No	0.15	188	No	0.08
	50	192	175	No	0.32	184	No	0.26	189	No	0.15
	55	192	177	No	0.44	186	No	0.42	191	No	0.37
	60	192	178	Yes	0.05	187	Yes	0.50	193	Yes	0.63
	65	192	180	Yes	0.62	189	Yes	0.66	195	Yes	0.85
	70	192	182	Yes	0.73	191	Yes	0.80	196	Yes	0.92
	75	192	184	Yes	0.82	193	Yes	0.90	198	Yes	0.98
	80	192	186	Yes	0.86	195	Yes	0.95	201	Yes	>0.99
	85	192	188	Yes	0.92	198	Yes	0.99	203	Yes	>0.99
90	192	192	Yes	0.98	201	Yes	>0.99	207	Yes	>0.99	
95	192	196	Yes	0.99	205	Yes	>0.99	212	Yes	>0.99	
3	5	203	166	No	<0.01	174	No	<0.01	178	No	<0.01
	10	203	171	No	<0.01	179	No	<0.01	183	No	<0.01
	15	203	175	No	0.01	182	No	<0.01	186	No	<0.01
	20	203	177	No	0.02	185	No	<0.01	189	No	<0.01
	25	203	179	No	0.04	187	No	0.01	192	No	<0.01
	30	203	181	No	0.07	189	No	0.03	194	No	<0.01
	35	203	183	No	0.13	191	No	0.07	196	No	0.01
	40	203	185	No	0.21	193	No	0.14	198	No	0.04
	45	203	187	No	0.31	195	No	0.26	199	No	0.08
	50	203	188	No	0.37	196	No	0.33	201	No	0.25
	55	203	190	Yes	0.50	198	Yes	0.50	203	Yes	0.50
	60	203	192	Yes	0.56	200	Yes	0.67	205	Yes	0.75
	65	203	194	Yes	0.69	201	Yes	0.74	207	Yes	0.92
	70	203	196	Yes	0.79	203	Yes	0.86	208	Yes	0.96
	75	203	198	Yes	0.87	205	Yes	0.93	211	Yes	>0.99
	80	203	200	Yes	0.93	208	Yes	0.98	213	Yes	>0.99
	85	203	202	Yes	0.96	210	Yes	0.99	216	Yes	>0.99
90	203	206	Yes	0.99	214	Yes	>0.99	219	Yes	>0.99	
95	203	211	Yes	>0.99	219	Yes	>0.99	224	Yes	>0.99	

Mathematics											
Grade	Start %ile*	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Level 4	Prob.		Level 4	Prob.		Level 4	Prob.
4	5	214	176	No	<0.01	182	No	<0.01	185	No	<0.01
	10	214	181	No	<0.01	187	No	<0.01	191	No	<0.01
	15	214	185	No	<0.01	191	No	<0.01	194	No	<0.01
	20	214	187	No	0.01	194	No	<0.01	197	No	<0.01
	25	214	190	No	0.02	196	No	<0.01	200	No	<0.01
	30	214	192	No	0.04	198	No	0.01	202	No	<0.01
	35	214	194	No	0.07	200	No	0.02	205	No	<0.01
	40	214	196	No	0.13	202	No	0.04	207	No	0.01
	45	214	198	No	0.21	204	No	0.10	209	No	0.04
	50	214	200	No	0.32	206	No	0.20	211	No	0.15
	55	214	201	No	0.37	208	No	0.33	212	No	0.25
	60	214	203	Yes	0.50	210	Yes	0.50	214	Yes	0.50
	65	214	205	Yes	0.63	212	Yes	0.67	217	Yes	0.85
	70	214	207	Yes	0.74	214	Yes	0.80	219	Yes	0.96
	75	214	209	Yes	0.83	216	Yes	0.90	221	Yes	0.99
	80	214	212	Yes	0.93	219	Yes	0.97	224	Yes	>0.99
85	214	214	Yes	0.96	221	Yes	0.99	227	Yes	>0.99	
90	214	218	Yes	0.99	225	Yes	>0.99	230	Yes	>0.99	
95	214	223	Yes	>0.99	231	Yes	>0.99	236	Yes	>0.99	
5	5	224	184	No	<0.01	189	No	<0.01	191	No	<0.01
	10	224	190	No	<0.01	194	No	<0.01	197	No	<0.01
	15	224	193	No	<0.01	198	No	<0.01	201	No	<0.01
	20	224	196	No	<0.01	201	No	<0.01	205	No	<0.01
	25	224	199	No	0.01	204	No	<0.01	207	No	<0.01
	30	224	201	No	0.02	206	No	<0.01	210	No	<0.01
	35	224	203	No	0.05	209	No	0.01	212	No	<0.01
	40	224	205	No	0.08	211	No	0.03	215	No	<0.01
	45	224	207	No	0.14	213	No	0.07	217	No	0.01
	50	224	209	No	0.22	215	No	0.15	219	No	0.04
	55	224	211	No	0.32	217	No	0.26	221	No	0.15
	60	224	213	No	0.44	219	No	0.42	223	No	0.37
	65	224	215	Yes	0.56	221	Yes	0.58	225	Yes	0.63
	70	224	217	Yes	0.68	223	Yes	0.74	228	Yes	0.92
	75	224	219	Yes	0.78	225	Yes	0.85	230	Yes	0.98
	80	224	222	Yes	0.89	228	Yes	0.95	233	Yes	>0.99
85	224	225	Yes	0.95	231	Yes	0.99	236	Yes	>0.99	
90	224	229	Yes	0.99	235	Yes	>0.99	240	Yes	>0.99	
95	224	234	Yes	>0.99	241	Yes	>0.99	246	Yes	>0.99	

Mathematics											
Grade	Start %ile*	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Level 4	Prob.		Level 4	Prob.		Level 4	Prob.
6	5	229	188	No	<0.01	192	No	<0.01	194	No	<0.01
	10	229	194	No	<0.01	198	No	<0.01	200	No	<0.01
	15	229	198	No	<0.01	202	No	<0.01	205	No	<0.01
	20	229	201	No	<0.01	205	No	<0.01	208	No	<0.01
	25	229	204	No	<0.01	208	No	<0.01	211	No	<0.01
	30	229	206	No	0.01	211	No	<0.01	214	No	<0.01
	35	229	209	No	0.03	213	No	<0.01	216	No	<0.01
	40	229	211	No	0.06	215	No	0.01	218	No	<0.01
	45	229	213	No	0.10	217	No	0.03	221	No	<0.01
	50	229	215	No	0.17	220	No	0.10	223	No	0.02
	55	229	217	No	0.27	222	No	0.20	225	No	0.08
	60	229	219	No	0.38	224	No	0.34	227	No	0.25
	65	229	221	Yes	0.50	226	Yes	0.50	230	Yes	0.63
	70	229	223	Yes	0.62	228	Yes	0.66	232	Yes	0.85
	75	229	226	Yes	0.78	231	Yes	0.86	235	Yes	0.98
	80	229	228	Yes	0.86	234	Yes	0.96	238	Yes	>0.99
85	229	231	Yes	0.94	237	Yes	0.99	241	Yes	>0.99	
90	229	235	Yes	0.99	241	Yes	>0.99	245	Yes	>0.99	
95	229	241	Yes	>0.99	247	Yes	>0.99	252	Yes	>0.99	
7	5	234	192	No	<0.01	194	No	<0.01	196	No	<0.01
	10	234	198	No	<0.01	201	No	<0.01	203	No	<0.01
	15	234	202	No	<0.01	205	No	<0.01	207	No	<0.01
	20	234	206	No	<0.01	209	No	<0.01	211	No	<0.01
	25	234	208	No	<0.01	212	No	<0.01	214	No	<0.01
	30	234	211	No	<0.01	215	No	<0.01	217	No	<0.01
	35	234	213	No	0.01	217	No	<0.01	220	No	<0.01
	40	234	216	No	0.03	219	No	<0.01	222	No	<0.01
	45	234	218	No	0.07	222	No	0.03	224	No	<0.01
	50	234	220	No	0.13	224	No	0.07	227	No	0.01
	55	234	222	No	0.21	226	No	0.14	229	No	0.04
	60	234	225	No	0.37	229	No	0.33	231	No	0.15
	65	234	227	Yes	0.50	231	Yes	0.50	234	Yes	0.50
	70	234	229	Yes	0.63	233	Yes	0.67	236	Yes	0.75
	75	234	232	Yes	0.79	236	Yes	0.86	239	Yes	0.96
	80	234	235	Yes	0.90	239	Yes	0.96	242	Yes	>0.99
85	234	238	Yes	0.96	243	Yes	>0.99	246	Yes	>0.99	
90	234	243	Yes	>0.99	247	Yes	>0.99	251	Yes	>0.99	
95	234	249	Yes	>0.99	254	Yes	>0.99	257	Yes	>0.99	

Mathematics											
Grade	Start %ile*	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Level 4	Prob.		Level 4	Prob.		Level 4	Prob.
8	5	241	194	No	<0.01	196	No	<0.01	197	No	<0.01
	10	241	201	No	<0.01	203	No	<0.01	205	No	<0.01
	15	241	205	No	<0.01	208	No	<0.01	210	No	<0.01
	20	241	209	No	<0.01	212	No	<0.01	214	No	<0.01
	25	241	212	No	<0.01	215	No	<0.01	217	No	<0.01
	30	241	215	No	<0.01	218	No	<0.01	220	No	<0.01
	35	241	218	No	<0.01	221	No	<0.01	223	No	<0.01
	40	241	220	No	0.01	223	No	<0.01	225	No	<0.01
	45	241	223	No	0.03	226	No	<0.01	228	No	<0.01
	50	241	225	No	0.06	228	No	0.01	230	No	<0.01
	55	241	227	No	0.10	231	No	0.05	233	No	<0.01
	60	241	230	No	0.19	233	No	0.11	235	No	0.02
	65	241	232	No	0.28	236	No	0.27	238	No	0.15
	70	241	235	No	0.44	238	No	0.42	241	Yes	0.50
	75	241	238	Yes	0.61	241	Yes	0.66	244	Yes	0.85
	80	241	241	Yes	0.76	244	Yes	0.85	247	Yes	0.98
85	241	245	Yes	0.90	248	Yes	0.97	251	Yes	>0.99	
90	241	249	Yes	0.97	253	Yes	>0.99	256	Yes	>0.99	
95	241	256	Yes	>0.99	260	Yes	>0.99	263	Yes	>0.99	

*%tile = Percentile.

Table 3.10. Proficiency Projections based on RIT Scores—ELA/Reading

ELA/Reading											
Grade	Start %ile*	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Level 4	Prob.		Level 4	Prob.		Level 4	Prob.
2	5	190	147	No	<0.01	156	No	<0.01	160	No	<0.01
	10	190	153	No	<0.01	162	No	<0.01	166	No	<0.01
	15	190	157	No	0.01	166	No	<0.01	170	No	<0.01
	20	190	160	No	0.02	169	No	<0.01	173	No	<0.01
	25	190	162	No	0.03	171	No	<0.01	175	No	<0.01
	30	190	164	No	0.06	173	No	0.01	177	No	<0.01
	35	190	166	No	0.09	175	No	0.03	180	No	<0.01
	40	190	168	No	0.15	177	No	0.07	182	No	0.01
	45	190	170	No	0.18	179	No	0.10	184	No	0.03
	50	190	172	No	0.25	181	No	0.17	186	No	0.11
	55	190	174	No	0.35	183	No	0.29	188	No	0.27
	60	190	176	No	0.45	185	No	0.43	189	No	0.38
	65	190	178	Yes	0.55	187	Yes	0.57	192	Yes	0.73
	70	190	180	Yes	0.60	189	Yes	0.71	194	Yes	0.89
	75	190	183	Yes	0.75	191	Yes	0.83	196	Yes	0.97
	80	190	185	Yes	0.82	194	Yes	0.93	199	Yes	>0.99
	85	190	188	Yes	0.88	197	Yes	0.98	202	Yes	>0.99
90	190	192	Yes	0.96	200	Yes	>0.99	205	Yes	>0.99	
95	190	197	Yes	0.99	206	Yes	>0.99	211	Yes	>0.99	
3	5	201	159	No	<0.01	167	No	<0.01	170	No	<0.01
	10	201	165	No	<0.01	173	No	<0.01	176	No	<0.01
	15	201	169	No	0.01	177	No	<0.01	180	No	<0.01
	20	201	173	No	0.02	180	No	<0.01	183	No	<0.01
	25	201	175	No	0.03	183	No	<0.01	186	No	<0.01
	30	201	178	No	0.07	185	No	0.01	189	No	<0.01
	35	201	180	No	0.09	188	No	0.05	191	No	<0.01
	40	201	182	No	0.14	190	No	0.07	193	No	0.01
	45	201	185	No	0.25	192	No	0.13	195	No	0.03
	50	201	187	No	0.30	194	No	0.23	197	No	0.11
	55	201	189	No	0.39	196	No	0.35	199	No	0.27
	60	201	191	Yes	0.50	198	Yes	0.50	201	Yes	0.50
	65	201	193	Yes	0.61	200	Yes	0.65	203	Yes	0.73
	70	201	195	Yes	0.66	202	Yes	0.77	206	Yes	0.94
	75	201	198	Yes	0.79	205	Yes	0.91	208	Yes	0.99
	80	201	201	Yes	0.89	207	Yes	0.95	211	Yes	>0.99
	85	201	204	Yes	0.93	211	Yes	0.99	214	Yes	>0.99
90	201	208	Yes	0.98	215	Yes	>0.99	218	Yes	>0.99	
95	201	214	Yes	>0.99	220	Yes	>0.99	224	Yes	>0.99	

ELA/Reading											
Grade	Start %ile*	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Level 4	Prob.		Level 4	Prob.		Level 4	Prob.
4	5	207	169	No	<0.01	176	No	<0.01	178	No	<0.01
	10	207	175	No	<0.01	182	No	<0.01	184	No	<0.01
	15	207	179	No	0.01	186	No	<0.01	188	No	<0.01
	20	207	183	No	0.03	189	No	<0.01	191	No	<0.01
	25	207	185	No	0.05	192	No	0.01	194	No	<0.01
	30	207	188	No	0.08	194	No	0.03	196	No	<0.01
	35	207	190	No	0.13	196	No	0.06	199	No	0.01
	40	207	192	No	0.20	198	No	0.13	201	No	0.03
	45	207	195	No	0.29	200	No	0.17	203	No	0.11
	50	207	197	No	0.39	202	No	0.28	205	No	0.27
	55	207	199	Yes	0.50	205	Yes	0.50	207	Yes	0.50
	60	207	201	Yes	0.61	207	Yes	0.65	209	Yes	0.73
	65	207	203	Yes	0.66	209	Yes	0.78	211	Yes	0.89
	70	207	205	Yes	0.76	211	Yes	0.87	213	Yes	0.97
	75	207	208	Yes	0.87	213	Yes	0.94	216	Yes	>0.99
	80	207	211	Yes	0.92	216	Yes	0.98	219	Yes	>0.99
85	207	214	Yes	0.96	219	Yes	>0.99	222	Yes	>0.99	
90	207	218	Yes	0.99	223	Yes	>0.99	226	Yes	>0.99	
95	207	224	Yes	>0.99	229	Yes	>0.99	232	Yes	>0.99	
5	5	211	178	No	<0.01	183	No	<0.01	185	No	<0.01
	10	211	183	No	<0.01	189	No	<0.01	191	No	<0.01
	15	211	187	No	0.02	193	No	<0.01	194	No	<0.01
	20	211	191	No	0.05	196	No	0.01	198	No	<0.01
	25	211	193	No	0.08	198	No	0.02	200	No	<0.01
	30	211	196	No	0.17	201	No	0.06	203	No	0.01
	35	211	198	No	0.20	203	No	0.13	205	No	0.03
	40	211	200	No	0.29	205	No	0.22	207	No	0.11
	45	211	202	No	0.39	207	No	0.35	209	No	0.27
	50	211	204	Yes	0.50	209	Yes	0.50	211	Yes	0.50
	55	211	207	Yes	0.61	211	Yes	0.65	213	Yes	0.73
	60	211	209	Yes	0.71	213	Yes	0.78	215	Yes	0.89
	65	211	211	Yes	0.80	215	Yes	0.87	217	Yes	0.97
	70	211	213	Yes	0.83	217	Yes	0.91	219	Yes	0.99
	75	211	216	Yes	0.92	220	Yes	0.97	222	Yes	>0.99
	80	211	218	Yes	0.95	222	Yes	0.99	224	Yes	>0.99
85	211	221	Yes	0.97	226	Yes	>0.99	228	Yes	>0.99	
90	211	225	Yes	0.99	229	Yes	>0.99	231	Yes	>0.99	
95	211	231	Yes	>0.99	235	Yes	>0.99	237	Yes	>0.99	

ELA/Reading											
Grade	Start %ile*	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Level 4	Prob.		Level 4	Prob.		Level 4	Prob.
6	5	216	183	No	<0.01	188	No	<0.01	189	No	<0.01
	10	216	189	No	<0.01	193	No	<0.01	195	No	<0.01
	15	216	193	No	0.01	197	No	<0.01	199	No	<0.01
	20	216	196	No	0.03	200	No	<0.01	202	No	<0.01
	25	216	199	No	0.08	203	No	0.02	205	No	<0.01
	30	216	202	No	0.13	205	No	0.04	207	No	<0.01
	35	216	204	No	0.19	208	No	0.12	209	No	0.01
	40	216	206	No	0.28	210	No	0.22	211	No	0.06
	45	216	208	No	0.33	212	No	0.35	213	No	0.17
	50	216	210	No	0.44	214	Yes	0.50	215	No	0.38
	55	216	212	Yes	0.56	216	Yes	0.58	217	Yes	0.62
	60	216	214	Yes	0.67	218	Yes	0.72	219	Yes	0.83
	65	216	217	Yes	0.76	220	Yes	0.83	222	Yes	0.97
	70	216	219	Yes	0.84	222	Yes	0.91	224	Yes	0.99
	75	216	221	Yes	0.90	225	Yes	0.97	226	Yes	>0.99
	80	216	224	Yes	0.94	227	Yes	0.99	229	Yes	>0.99
85	216	227	Yes	0.98	230	Yes	>0.99	232	Yes	>0.99	
90	216	231	Yes	>0.99	234	Yes	>0.99	236	Yes	>0.99	
95	216	237	Yes	>0.99	240	Yes	>0.99	242	Yes	>0.99	
7	5	217	187	No	<0.01	190	No	<0.01	191	No	<0.01
	10	217	193	No	<0.01	196	No	<0.01	197	No	<0.01
	15	217	197	No	0.02	200	No	<0.01	201	No	<0.01
	20	217	200	No	0.06	203	No	0.01	205	No	<0.01
	25	217	203	No	0.10	206	No	0.04	207	No	<0.01
	30	217	206	No	0.19	209	No	0.12	210	No	0.01
	35	217	208	No	0.28	211	No	0.22	212	No	0.06
	40	217	210	No	0.39	213	No	0.28	214	No	0.17
	45	217	212	No	0.44	215	No	0.42	216	No	0.38
	50	217	214	Yes	0.56	217	Yes	0.58	218	Yes	0.62
	55	217	216	Yes	0.67	219	Yes	0.72	220	Yes	0.83
	60	217	218	Yes	0.76	221	Yes	0.83	223	Yes	0.97
	65	217	221	Yes	0.84	223	Yes	0.91	225	Yes	0.99
	70	217	223	Yes	0.90	226	Yes	0.97	227	Yes	>0.99
	75	217	225	Yes	0.94	228	Yes	0.99	229	Yes	>0.99
	80	217	228	Yes	0.98	231	Yes	>0.99	232	Yes	>0.99
85	217	231	Yes	0.99	234	Yes	>0.99	235	Yes	>0.99	
90	217	235	Yes	>0.99	238	Yes	>0.99	239	Yes	>0.99	
95	217	241	Yes	>0.99	244	Yes	>0.99	245	Yes	>0.99	

ELA/Reading											
Grade	Start %ile*	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Level 4	Prob.		Level 4	Prob.		Level 4	Prob.
8	5	221	190	No	<0.01	193	No	<0.01	194	No	<0.01
	10	221	196	No	<0.01	199	No	<0.01	200	No	<0.01
	15	221	200	No	0.02	203	No	<0.01	204	No	<0.01
	20	221	204	No	0.05	206	No	0.01	207	No	<0.01
	25	221	207	No	0.11	209	No	0.03	210	No	<0.01
	30	221	209	No	0.17	212	No	0.06	213	No	0.01
	35	221	211	No	0.20	214	No	0.13	215	No	0.03
	40	221	214	No	0.34	216	No	0.22	217	No	0.11
	45	221	216	No	0.45	218	No	0.35	220	No	0.38
	50	221	218	Yes	0.55	221	Yes	0.58	222	Yes	0.62
	55	221	220	Yes	0.61	223	Yes	0.72	224	Yes	0.83
	60	221	222	Yes	0.71	225	Yes	0.83	226	Yes	0.94
	65	221	225	Yes	0.83	227	Yes	0.91	228	Yes	0.99
	70	221	227	Yes	0.89	229	Yes	0.96	231	Yes	>0.99
	75	221	230	Yes	0.94	232	Yes	0.99	233	Yes	>0.99
	80	221	232	Yes	0.96	235	Yes	>0.99	236	Yes	>0.99
85	221	236	Yes	0.99	238	Yes	>0.99	239	Yes	>0.99	
90	221	240	Yes	>0.99	242	Yes	>0.99	243	Yes	>0.99	
95	221	246	Yes	>0.99	248	Yes	>0.99	249	Yes	>0.99	

*%tile = Percentile.

Table 3.11. Proficiency Projections based on RIT Scores—Science

Science											
Grade	Start %ile*	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Level 3	Prob.		Level 3	Prob.		Level 3	Prob.
5	5	212	181	No	<0.01	185	No	<0.01	186	No	<0.01
	10	212	185	No	<0.01	189	No	<0.01	191	No	<0.01
	15	212	188	No	0.01	192	No	<0.01	194	No	<0.01
	20	212	190	No	0.02	194	No	<0.01	196	No	<0.01
	25	212	192	No	0.03	196	No	0.01	198	No	<0.01
	30	212	194	No	0.06	198	No	0.02	200	No	<0.01
	35	212	196	No	0.10	200	No	0.04	202	No	<0.01
	40	212	197	No	0.10	201	No	0.05	203	No	<0.01
	45	212	199	No	0.16	203	No	0.10	205	No	0.02
	50	212	200	No	0.19	204	No	0.14	206	No	0.04
	55	212	202	No	0.28	206	No	0.24	208	No	0.12
	60	212	203	No	0.33	207	No	0.30	209	No	0.19
	65	212	205	No	0.39	209	No	0.36	211	No	0.38
	70	212	206	No	0.44	210	No	0.43	213	Yes	0.62
	75	212	208	Yes	0.56	212	Yes	0.57	214	Yes	0.72
	80	212	210	Yes	0.61	214	Yes	0.70	216	Yes	0.88
	85	212	212	Yes	0.72	216	Yes	0.82	219	Yes	0.98
90	212	215	Yes	0.84	219	Yes	0.92	222	Yes	>0.99	
95	212	220	Yes	0.94	224	Yes	0.99	226	Yes	>0.99	
8	5	229	188	No	<0.01	191	No	<0.01	191	No	<0.01
	10	229	193	No	<0.01	196	No	<0.01	196	No	<0.01
	15	229	196	No	<0.01	199	No	<0.01	199	No	<0.01
	20	229	198	No	<0.01	201	No	<0.01	202	No	<0.01
	25	229	201	No	<0.01	204	No	<0.01	204	No	<0.01
	30	229	203	No	<0.01	206	No	<0.01	206	No	<0.01
	35	229	205	No	<0.01	207	No	<0.01	208	No	<0.01
	40	229	206	No	0.01	209	No	<0.01	210	No	<0.01
	45	229	208	No	0.01	211	No	<0.01	212	No	<0.01
	50	229	210	No	0.02	212	No	<0.01	213	No	<0.01
	55	229	211	No	0.03	214	No	0.01	215	No	<0.01
	60	229	213	No	0.04	216	No	0.02	217	No	<0.01
	65	229	215	No	0.07	217	No	0.03	219	No	<0.01
	70	229	217	No	0.12	219	No	0.06	221	No	0.01
	75	229	219	No	0.15	221	No	0.11	223	No	0.04
	80	229	221	No	0.21	223	No	0.19	225	No	0.12
	85	229	223	No	0.30	226	No	0.36	228	No	0.38
90	229	227	Yes	0.50	229	Yes	0.57	231	Yes	0.72	
95	229	231	Yes	0.70	234	Yes	0.85	236	Yes	0.98	

*%tile = Percentile.

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