2018 Linking Study: Predicting Performance on the NSCAS Summative ELA and Mathematics Assessments based on MAP Growth Scores

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NWEA Psychometric Solutions

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Executive Summary

This linking study, conducted in November 2018 using Spring 2018 data, produced a set of MAP® Growth™ Reading and Mathematics Rasch Unit (RIT) cut scores that correspond to the Nebraska Student-Centered Assessment System (NSCAS) Summative English Language Arts (ELA) and Mathematics scale scores associated with the Developing, On Track, and College and Career Readiness (CCR) Benchmark achievement levels. The On Track cut score demarks the minimum level of performance considered to be proficient for accountability purposes.

These MAP Growth cut scores help determine whether students are on track to reach proficiency (i.e., the On Track achievement level) on the NSCAS test in the spring based on students' MAP Growth RIT scores from the fall, winter, and spring administrations. For example, a Grade 3 student who obtained a MAP Growth Reading RIT score of 200 in the fall is likely to receive On Track proficiency on the NSCAS spring test.

The degree to which MAP Growth tests can accurately predict student proficiency status on the NSCAS tests was determined by classification accuracy statistics based on spring test results. The classification accuracy rate is 0.84 for ELA/Reading for all grades and ranges from 0.86 to 0.87 for Mathematics, suggesting that the MAP Growth cut scores for each content area and grade are good predictors of whether a student will reach On Track proficiency on the NSCAS Summative assessment.

The results of this study can help educators predict student performance on the NSCAS Summative tests as early as possible and identify students at risk of failing to meet the required performance standards so they can receive the necessary resources and assistance to meet their goals. However, some caution should be taken when using this information:

- The tables provide information about scores on different tests that measure slightly different constructs. Therefore, the scores cannot be assumed to be interchangeable.

- Only students who took both the NSCAS and MAP Growth assessments in Spring 2018 were included in the study sample. Since not all students took MAP Growth, the study sample did not include all NSCAS students. Therefore, caution should be exercised when generalizing the results to students who differ significantly in characteristics from this sample.

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 the MAP® Growth™ test scores. An 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 in November 2018 to statistically connect the scales of the Nebraska Student-Centered Assessment System (NSCAS) Summative English Language Arts (ELA) and Mathematics Grades 3–8 assessments with those of the MAP Growth Reading and Mathematics assessments taken during the Spring 2018 term. The purpose of this study is to determine the MAP Growth scores that predict whether students are on track to reach proficiency on the NSCAS Summative ELA and Mathematics assessments. Specifically, this study produced the following outcomes:

- MAP Growth Reading and Mathematics Rasch Unit (RIT) cut scores that correspond to the cut scores on the NSCAS Summative ELA and Mathematics tests using the equipercentile linking procedure for MAP Growth spring results and the 2015 norms for MAP Growth fall and winter results.
- Classification accuracy summary statistics based on estimated MAP Growth cut scores to determine the degree to which MAP Growth tests accurately predict student proficiency status on the NSCAS tests.
- The probability of meeting or exceeding grade-level proficiency on the NSCAS spring assessment based on the observed MAP Growth scores taken during the fall and winter using the 2015 norms (Thum & Houser, 2015).

1.2. Assessment Overview

1.2.1. NSCAS Summative Assessments

The NSCAS Summative ELA and Mathematics assessments are administered once a year in the spring in Grades 3–8. The NSCAS Summative Science assessment is also administered in the spring in Grades 5 and 8. The assessments include multiple-choice and technology-enhanced items and provide total scores comparable across grades, subscores, growth across administrations, and achievement levels. The Science assessments are administered as fixed-form assessments, whereas ELA and Mathematics are administered online adaptively beginning in Spring 2018, with paper-pencil versions available as an accommodation.

ELA and Mathematics have two cut scores in each grade that distinguish between the following achievement levels. The On Track cut score (i.e., the score that distinguishes between Developing and On Track performance) demarks the minimum level of performance considered to be proficient for accountability purposes.

- Developing
- On Track
- College and Career Readiness (CCR) Benchmark

1.2.2. MAP Growth

MAP Growth Reading and Mathematics are computer adaptive interim assessments aligned to the Nebraska College and Career Ready Standards. The MAP Growth Reading assessments are comparable to the academic content standards in ELA. MAP Growth scores are reported on a vertical scale with a range of 100–350 in Rasch Unit (RIT). Each content area has its own scale. To aid interpretation of MAP Growth scores, NWEA periodically conducts norming studies of student and school performance on MAP Growth. The most recent MAP Growth norming study by Thum & Hauser (2015) employed multi-level growth models on nearly 500,000 longitudinal test scores from over 100,000 students that were weighted to create large, nationally representative norms.

2. Methods

2.1. Data Collection

The linking study is based on data from the Spring 2018 NSCAS ELA and Mathematics and MAP Growth Reading and Mathematics assessments. Only students who took both the NSCAS and MAP Growth assessments in Spring 2018 were included in the study sample. Each of these student's NSCAS record was matched to their MAP Growth score by using the student's first and last names, date of birth, student ID, and other available identifying information. After merging MAP Growth and NSCAS data, the following exclusion rules were applied to remove any invalid students:

- If a student did not complete the test (i.e., the student did not respond to all 48)
- If a student does not have either a scale score or achievement level
- If a student has an invalid test code

2.2. Linking Methods

The equipercentile procedure (e.g., Kolen & Brennan, 2004) was used to link the NSCAS scores and the MAP Growth spring RIT scores, and the 2015 MAP Growth norms (Thum & Hauser, 2015) were used to link the NSCAS scores and the MAP Growth fall and winter RIT scores. The MAP Growth spring cut scores could be calculated using the equipercentile linking method because that data is directly connected to the NSCAS spring data used in the study.

2.2.1. MAP Growth Spring 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). Consider the linked scores between two tests. Let x represent a score on Test X (e.g., NSCAS). 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 1:

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

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

2.2.2. MAP Growth Fall and Winter Cut Scores

MAP Growth conditional growth norms provide students' expected score gains across testing seasons (Thum & Hauser, 2015). This information was used to estimate the previous fall and winter terms' MAP Growth scores that would meet the spring cut, considering the growth that is expected of the previous term's RIT value. Equation 2 was used to determine the fall or winter MAP Growth score needed to reach the spring cut score, considering the expected growth associated with the previous RIT score:

$$RIT_{SpringCut} = RIT_{previous} + g \quad (2)$$

where:

- $RIT_{SpringCut}$ is the MAP Growth spring cut.
- $RIT_{previous}$ is the unknown fall or winter RIT score.
- g is the expected growth from fall or winter to spring corresponding to $RIT_{previous}$.

2.3. Classification Accuracy Summary Statistics

The degree to which MAP Growth tests predict student proficiency status on the NSCAS tests can be described using classification accuracy statistics, which are important indicators for evaluating reliability and validity of classification results. Table 2.1 describes the classification accuracy statistics provided in this report. The results are based on the Spring 2018 MAP Growth and NSCAS data for On Track proficiency (i.e., the cut score between Developing and On Track + CCR Benchmark).

Table 2.1. Descriptions of Classification Accuracy Summary Statistics

Classification Accuracy Statistic	Description*	Interpretation
Overall Classification Accuracy Rate	(TP + TN) / (total sample size)	The proportion of students in the study sample whose proficiency classification on the state test was correctly predicted by MAP Growth cut scores (Pommerich, Hanson, Harris, & Sconing, 2004).
Sensitivity	TP / (TP + FN)	The proportion of proficient students who were correctly identified on the MAP Growth test as such.
Specificity	TN / (TN + FP)	The proportion of below-proficient students who were correctly identified on the MAP Growth test as such.
False Negative Rate	FN / (FN + TP)	The proportion of proficient students who were incorrectly predicted by MAP Growth test to be below proficiency.
False Positive Rate	FP / (FP + TN)	The proportion of below-proficient students who were incorrectly predicted by MAP Growth test to be proficient.

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

2.4. Proficiency Projection

In additional to the fall and winter MAP Growth cut scores, the MAP Growth conditional growth norms data were also used to calculate the probability of reaching proficiency on the NSCAS test based on the student's MAP Growth scores from fall, winter, and spring.

Equation 3 was used to calculate the probability of a student achieving proficiency (i.e., the On Track achievement level) on the NSCAS test based on their fall or winter MAP Growth score:

$$Pr(Achieving\ On\ Track\ in\ spring|\ starting\ RIT) = \Phi\left(\frac{RIT_{previous} + g - RIT_{SpringCut}}{SD}\right) \quad (3)$$

where:

- Φ is a standardized normal cumulative distribution.
- $RIT_{previous}$ is the student's RIT score in fall or winter.
- g is the expected growth from fall or winter to spring corresponding to that previous RIT.
- $RIT_{SpringCut}$ is the MAP Growth On Track cut score for spring.
- SD is the conditional standard deviation of growth from fall or winter to spring.

Equation 4 was used to estimate the probability of a student achieving proficiency on the NSCAS test based on their spring MAP Growth score:

$$Pr(Achieving\ On\ Track\ in\ spring\ |\ spring\ RIT) = \Phi\left(\frac{RIT_{Spring} - RIT_{SpringCut}}{SE}\right) \quad (4)$$

where RIT_{Spring} is the student's RIT score in spring, and SE is the standard error of measurement for MAP Growth.

3. Results

3.1. Study Sample

Only students who took both the NSCAS and MAP Growth assessments in Spring 2018 were included in the study sample. Table 3.1 presents the ethnicity and gender distributions for all students who took the Spring 2018 NSCAS Summative assessment, and Table 3.2 presents the demographics of the student sample used in the linking study. While the n-count differs by about 10,000 students for each grade and content area, the ethnicity and gender distributions are very similar, indicating that the study sample is a good representation of the general NSCAS student population.

Table 3.1. Spring 2018 NSCAS Student Demographics

Content Area	Grade	N	Ethnicity*							Gender	
			White	Black	Hispanic	Asian	AI/AN	NH/PI	MR	Female	Male
ELA	3	24,279	65.3	6.7	19.6	2.7	1.2	0.1	4.4	48.8	51.2
	4	24,259	65.5	7.0	19.2	2.8	1.2	0.1	4.2	48.5	51.5
	5	22,687	66.0	6.8	19.0	2.7	1.3	0.2	4.1	48.4	51.6
	6	23,772	66.1	7.0	19.0	2.7	1.3	0.1	3.8	49.0	51.0
	7	23,390	67.1	6.8	18.4	2.7	1.2	0.2	3.7	48.6	51.4
	8	23,724	68.0	6.2	18.3	2.7	1.2	0.1	3.4	48.8	51.2
Mathematics	3	24,228	65.3	6.7	19.5	2.7	1.2	0.1	4.4	48.8	51.2
	4	24,234	65.6	7.0	19.1	2.8	1.2	0.1	4.2	48.6	51.4
	5	22,640	66.1	6.8	18.9	2.7	1.3	0.2	4.1	48.4	51.6
	6	23,671	66.2	6.9	19.0	2.7	1.3	0.1	3.8	49.0	51.0
	7	23,394	67.2	6.8	18.3	2.7	1.2	0.2	3.7	48.6	51.4
	8	23,695	68.1	6.2	18.1	2.7	1.2	0.1	3.4	48.8	51.2

*AI/AN = American Indian/Alaska Native. NH/PI = Native Hawaiian or Other Pacific Islander. MR = Other/Multi-Race.

Table 3.2. Linking Study Sample Demographics

Content Area	Grade	N	Ethnicity*							Gender	
			White	Black	Hispanic	Asian	AI/AN	NH/PI	MR	Female	Male
ELA	3	15,276	60.7	8.1	22.9	3.1	1.3	0.1	3.9	48.6	51.4
	4	14,919	61.3	8.6	21.8	3.2	1.2	0.2	3.6	48.3	51.7
	5	13,669	61.0	8.4	22.3	3.1	1.3	0.2	3.7	48.6	51.4
	6	13,947	61.7	8.3	22.1	3.1	1.4	0.1	3.4	48.9	51.1
	7	13,027	62.1	8.5	21.6	3.0	1.1	0.2	3.4	49.0	51.0
	8	12,887	63.2	7.5	22.0	3.2	1.1	0.1	2.9	48.9	51.1
Mathematics	3	15,182	60.9	8.1	22.7	3.1	1.3	0.1	3.8	48.8	51.2
	4	14,737	61.3	8.7	21.7	3.2	1.1	0.2	3.7	48.5	51.5
	5	13,673	61.1	8.4	22.3	3.1	1.3	0.2	3.7	48.5	51.5
	6	14,026	61.9	8.3	21.9	3.1	1.3	0.1	3.4	48.9	51.1
	7	13,356	62.7	8.2	21.4	2.9	1.1	0.2	3.4	49.0	51.0
	8	13,050	64.4	7.3	21.2	3.1	1.1	0.1	2.9	49.0	51.0

*AI/AN = American Indian/Alaska Native. NH/PI = Native Hawaiian or Other Pacific Islander. MR = Other/Multi-Race.

3.2. Descriptive Statistics

Table 3.3 provides descriptive statistics of the NSCAS and MAP Growth scores for Spring 2018, including the correlation coefficient (*r*) between the two scales. As shown in the table, the correlation coefficients between MAP Growth and NSCAS scores range from 0.81 to 0.83 for ELA/Reading and 0.85 to 0.87 for Mathematics. In general, these correlations can be considered criterion-related validity evidence between MAP Growth and NSCAS assessments by content area. These results indicate that the relationship between MAP Growth and NSCAS test scores is strong.

Table 3.3. Descriptive Statistics of NSCAS and MAP Growth Scores from the Study Sample

Content Area	Grade	N	*r*	NSCAS*				MAP Growth*			
				Mean	SD	Min.	Max.	Mean	SD	Min.	Max.
ELA	3	15,276	0.82	2476	76.24	2222	2832	199	15.53	142	246
	4	14,919	0.83	2508	72.16	2252	2826	207	15.29	140	250
	5	13,669	0.82	2528	67.13	2282	2833	213	15.01	140	256
	6	13,947	0.82	2537	66.52	2292	2790	217	15.17	149	264
	7	13,027	0.81	2550	73.25	2328	2862	220	15.61	139	264
	8	12,887	0.82	2559	66.55	2312	2873	223	16.18	147	268
Mathematics	3	15,182	0.87	1190	71.23	1002	1428	204	14.01	134	253
	4	14,737	0.85	1225	67.47	1040	1491	214	15.44	139	278
	5	13,673	0.86	1239	65.1	1022	1482	222	16.95	139	299
	6	14,026	0.87	1252	72.04	1038	1488	226	16.47	134	277
	7	13,356	0.85	1254	66.79	1065	1540	231	17.92	136	310
	8	13,050	0.86	1270	71.56	1069	1545	236	19.32	136	316

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

3.3. Corresponding MAP Growth and NSCAS Cut Scores

Table 3.4 and Table 3.5 present the NSCAS scale scores for each achievement level and the corresponding MAP Growth RIT cut scores and percentile ranges by content area and grade. These tables can be used to predict a student's likely achievement level on the NSCAS test when MAP Growth is taken in the spring, fall, or winter. For example, a Grade 6 student who obtained a MAP Growth Reading RIT score of 222 in the spring is likely to reach On Track proficiency on the NSCAS test. A Grade 3 student who obtained a MAP Growth Reading RIT score of 200 in the fall is also likely to reach On Track proficiency on the NSCAS spring test.

Table 3.4. Corresponding MAP Growth and NSCAS Cut Scores—ELA/Reading

NSCAS ELA			
Grade	**Developing**	**On Track***	**CCR Benchmark**
3	2220–2476	**2477**–2556	2557–2840
4	2250–2499	**2500**–2581	2582–2850
5	2280–2530	**2531**–2598	2599–2860
6	2290–2542	**2543**–2602	2603–2870
7	2300–2555	**2556**–2629	2630–2880
8	2310–2560	**2561**–2631	2632–2890

MAP Growth Reading (Spring)						
	Developing		**On Track**		**CCR Benchmark**	
Grade	**RIT**	**Percentile**	**RIT***	**Percentile**	**RIT**	**Percentile**
3	100–200	1–54	**201**–214	55–85	215–350	86–99
4	100–206	1–51	**207**–221	52–85	222–350	86–99
5	100–214	1–57	**215**–226	58–84	227–350	85–99
6	100–219	1–60	**220**–230	61–84	231–350	85–99
7	100–222	1–61	**223**–234	62–85	235–350	86–99
8	100–224	1–61	**225**–238	62–87	239–350	88–99

MAP Growth Reading (Fall)						
	Developing		**On Track**		**CCR Benchmark**	
Grade	**RIT**	**Percentile**	**RIT***	**Percentile**	**RIT**	**Percentile**
3	100–190	1–55	**191**–207	56–88	208–350	89–99
4	100–198	1–50	**199**–216	51–88	217–350	89–99
5	100–208	1–57	**209**–222	58–86	223–350	87–99
6	100–215	1–61	**216**–228	62–87	229–350	88–99
7	100–219	1–62	**220**–232	63–88	233–350	89–99
8	100–222	1–63	**223**–236	64–88	237–350	89–99

MAP Growth Reading (Winter)						
	Developing		**On Track**		**CCR Benchmark**	
Grade	**RIT**	**Percentile**	**RIT***	**Percentile**	**RIT**	**Percentile**
3	100–197	1–54	**198**–212	55–86	213–350	87–99
4	100–204	1–52	**205**–220	53–87	221–350	88–99
5	100–212	1–57	**213**–225	58–85	226–350	86–99
6	100–218	1–61	**219**–229	62–85	230–350	86–99
7	100–221	1–62	**222**–233	63–86	234–350	87–99
8	100–223	1–61	**224**–237	62–88	238–350	89–99

*Bolded numbers indicate the cut scores considered to be at least proficient for accountability purposes.

Table 3.5. Corresponding MAP Growth and NSCAS Cut Scores—Mathematics

NSCAS Mathematics			
Grade	**Developing**	**On Track***	**CCR Benchmark**
3	1000–1189	**1190**–1285	1286–1470
4	1010–1221	**1222**–1316	1317–1500
5	1020–1235	**1236**–1330	1331–1510
6	1030–1243	**1244**–1341	1342–1530
7	1040–1246	**1247**–1345	1346–1540
8	1050–1263	**1264**–1364	1365–1550

MAP Growth Mathematics (Spring)						
	Developing		**On Track**		**CCR Benchmark**	
Grade	**RIT**	**Percentile**	**RIT***	**Percentile**	**RIT**	**Percentile**
3	100–204	1–53	**205**–220	54–89	221–350	90–99
4	100–214	1–52	**215**–232	53–89	233–350	90–99
5	100–223	1–55	**224**–243	56–91	244–350	92–99
6	100–225	1–50	**226**–244	51–87	245–350	88–99
7	100–231	1–56	**232**–252	57–91	253–350	92–99
8	100–236	1–61	**237**–258	62–92	259–350	93–99

MAP Growth Mathematics (Fall)						
	Developing		**On Track**		**CCR Benchmark**	
Grade	**RIT**	**Percentile**	**RIT***	**Percentile**	**RIT**	**Percentile**
3	100–191	1–53	**192**–208	54–91	209–350	92–99
4	100–202	1–51	**203**–221	52–92	222–350	93–99
5	100–213	1–55	**214**–233	56–93	234–350	94–99
6	100–217	1–49	**218**–237	50–89	238–350	90–99
7	100–225	1–56	**226**–246	57–92	247–350	93–99
8	100–231	1–61	**232**–254	62–94	255–350	95–99

MAP Growth Mathematics (Winter)						
	Developing		**On Track**		**CCR Benchmark**	
Grade	**RIT**	**Percentile**	**RIT***	**Percentile**	**RIT**	**Percentile**
3	100–199	1–53	**200**–215	54–90	216–350	91–99
4	100–209	1–52	**210**–227	53–90	228–350	91–99
5	100–219	1–55	**220**–239	56–92	240–350	93–99
6	100–222	1–51	**223**–241	52–88	242–350	89–99
7	100–229	1–57	**230**–250	58–92	251–350	93–99
8	100–234	1–61	**235**–256	62–93	257–350	94–99

*Bolded numbers indicate the cut scores considered to be at least proficient for accountability purposes.

3.4. Classification Accuracy Summary Statistics

Table 3.6 presents the overall classification accuracy rate, sensitivity, specificity, false positive rate, and false negative rate. These results indicate how well MAP Growth spring scores predict On Track proficiency on the NSCAS tests, providing insight into the predictive validity of MAP Growth tests. The overall classification accuracy rate is 0.84 for ELA/Reading for all grades and ranges from 0.86 to 0.87 for Mathematics. These values suggest that the MAP Growth cut scores for each content area and grade are good predictors of whether a student will reach On Track proficiency on the NSCAS Summative assessment.

Table 3.6. Classification Accuracy for On Track Proficiency

Grade	N	Cut Score		Class. Accuracy*	Rate*		Sensitivity	Specificity
		MAP Growth	NSCAS		FP	FN		
ELA/Reading								
3	15,276	201	2477	0.84	0.17	0.14	0.86	0.83
4	14,919	207	2500	0.84	0.20	0.12	0.88	0.80
5	13,669	215	2531	0.84	0.18	0.14	0.86	0.82
6	13,947	220	2543	0.84	0.16	0.16	0.84	0.84
7	13,027	223	2556	0.84	0.16	0.15	0.85	0.84
8	12,887	225	2561	0.84	0.19	0.14	0.86	0.82
Mathematics								
3	15,182	205	1190	0.86	0.18	0.09	0.91	0.82
4	14,737	215	1222	0.87	0.16	0.10	0.90	0.84
5	13,673	224	1236	0.86	0.15	0.14	0.86	0.85
6	14,026	226	1244	0.87	0.18	0.09	0.91	0.82
7	13,356	232	1247	0.87	0.17	0.10	0.90	0.84
8	13,050	237	1264	0.87	0.14	0.13	0.87	0.86

*Class. Accuracy = overall classification accuracy rate. FP = false positives. FN = false negatives.

3.5. Proficiency Projection

Table 3.7, Table 3.8, and Table 3.9 present the estimated probability of meeting the On Track achievement level on the spring NSCAS test based on students' observed MAP Growth score when MAP Growth is taken in the spring, fall, or winter, respectively. For example, a Grade 3 student who obtained a MAP Growth Mathematics score of 199 in the fall has an 83% chance of reaching On Track proficiency or higher on the NSCAS spring test.

Table 3.7. Probability of Reaching On Track Proficiency on NSCAS when MAP Growth is taken in Spring

		ELA/Reading				Mathematics			
			Projected Proficiency				Projected Proficiency		
Grade	Start Percentile	Spring RIT	Cut Score	On Track	Prob.*	Spring RIT	Cut Score	On Track	Prob.*
3	5	174	201	No	<0.01	181	205	No	<0.01
	10	179	201	No	<0.01	186	205	No	<0.01
	15	183	201	No	<0.01	189	205	No	<0.01
	20	186	201	No	<0.01	192	205	No	<0.01
	25	188	201	No	<0.01	194	205	No	<0.01
	30	191	201	No	<0.01	196	205	No	<0.01
	35	193	201	No	0.01	198	205	No	0.01
	40	195	201	No	0.03	200	205	No	0.04
	45	197	201	No	0.11	202	205	No	0.15
	50	199	201	No	0.27	203	205	No	0.25
	55	201	201	Yes	0.50	205	205	Yes	0.50
	60	202	201	Yes	0.62	207	205	Yes	0.75
	65	204	201	Yes	0.83	209	205	Yes	0.92
	70	207	201	Yes	0.97	211	205	Yes	0.98
	75	209	201	Yes	0.99	213	205	Yes	>0.99
	80	211	201	Yes	>0.99	215	205	Yes	>0.99
	85	214	201	Yes	>0.99	218	205	Yes	>0.99
	90	218	201	Yes	>0.99	221	205	Yes	>0.99
	95	223	201	Yes	>0.99	226	205	Yes	>0.99
4	5	181	207	No	<0.01	189	215	No	<0.01
	10	187	207	No	<0.01	194	215	No	<0.01
	15	190	207	No	<0.01	198	215	No	<0.01
	20	193	207	No	<0.01	201	215	No	<0.01
	25	196	207	No	<0.01	203	215	No	<0.01
	30	198	207	No	<0.01	206	215	No	<0.01
	35	200	207	No	0.01	208	215	No	0.01
	40	202	207	No	0.06	210	215	No	0.04
	45	204	207	No	0.17	212	215	No	0.15
	50	206	207	No	0.38	213	215	No	0.25
	55	208	207	Yes	0.62	215	215	Yes	0.50
	60	210	207	Yes	0.83	217	215	Yes	0.75
	65	212	207	Yes	0.94	219	215	Yes	0.92
	70	214	207	Yes	0.99	221	215	Yes	0.98
	75	216	207	Yes	>0.99	224	215	Yes	>0.99
	80	218	207	Yes	>0.99	226	215	Yes	>0.99
	85	221	207	Yes	>0.99	229	215	Yes	>0.99
	90	225	207	Yes	>0.99	233	215	Yes	>0.99
	95	230	207	Yes	>0.99	238	215	Yes	>0.99

Grade	Start Percentile	ELA/Reading				Mathematics			
			Projected Proficiency				Projected Proficiency		
		Spring RIT	Cut Score	On Track	Prob.*	Spring RIT	Cut Score	On Track	Prob.*
5	5	188	215	No	<0.01	195	224	No	<0.01
	10	193	215	No	<0.01	201	224	No	<0.01
	15	197	215	No	<0.01	205	224	No	<0.01
	20	199	215	No	<0.01	208	224	No	<0.01
	25	202	215	No	<0.01	210	224	No	<0.01
	30	204	215	No	<0.01	213	224	No	<0.01
	35	206	215	No	<0.01	215	224	No	<0.01
	40	208	215	No	0.01	217	224	No	0.01
	45	210	215	No	0.06	219	224	No	0.04
	50	212	215	No	0.17	221	224	No	0.15
	55	214	215	No	0.38	223	224	No	0.37
	60	216	215	Yes	0.62	225	224	Yes	0.63
	65	217	215	Yes	0.73	228	224	Yes	0.92
	70	220	215	Yes	0.94	230	224	Yes	0.98
	75	222	215	Yes	0.99	232	224	Yes	>0.99
	80	224	215	Yes	>0.99	235	224	Yes	>0.99
	85	227	215	Yes	>0.99	238	224	Yes	>0.99
	90	231	215	Yes	>0.99	242	224	Yes	>0.99
	95	236	215	Yes	>0.99	248	224	Yes	>0.99
6	5	192	220	No	<0.01	198	226	No	<0.01
	10	197	220	No	<0.01	204	226	No	<0.01
	15	201	220	No	<0.01	208	226	No	<0.01
	20	203	220	No	<0.01	211	226	No	<0.01
	25	206	220	No	<0.01	214	226	No	<0.01
	30	208	220	No	<0.01	217	226	No	<0.01
	35	210	220	No	<0.01	219	226	No	0.01
	40	212	220	No	0.01	221	226	No	0.04
	45	214	220	No	0.03	223	226	No	0.15
	50	216	220	No	0.11	225	226	No	0.37
	55	218	220	No	0.27	227	226	Yes	0.63
	60	219	220	No	0.38	230	226	Yes	0.92
	65	221	220	Yes	0.62	232	226	Yes	0.98
	70	223	220	Yes	0.83	234	226	Yes	>0.99
	75	226	220	Yes	0.97	237	226	Yes	>0.99
	80	228	220	Yes	0.99	239	226	Yes	>0.99
	85	231	220	Yes	>0.99	243	226	Yes	>0.99
	90	235	220	Yes	>0.99	247	226	Yes	>0.99
	95	240	220	Yes	>0.99	253	226	Yes	>0.99

Grade	Start Percentile	ELA/Reading				Mathematics			
			Projected Proficiency				Projected Proficiency		
		Spring RIT	Cut Score	On Track	Prob.*	Spring RIT	Cut Score	On Track	Prob.*
7	5	193	223	No	<0.01	199	232	No	<0.01
	10	199	223	No	<0.01	206	232	No	<0.01
	15	202	223	No	<0.01	210	232	No	<0.01
	20	205	223	No	<0.01	214	232	No	<0.01
	25	208	223	No	<0.01	217	232	No	<0.01
	30	210	223	No	<0.01	219	232	No	<0.01
	35	212	223	No	<0.01	222	232	No	<0.01
	40	214	223	No	<0.01	224	232	No	<0.01
	45	216	223	No	0.01	226	232	No	0.02
	50	218	223	No	0.06	229	232	No	0.15
	55	220	223	No	0.17	231	232	No	0.37
	60	222	223	No	0.38	233	232	Yes	0.63
	65	224	223	Yes	0.62	235	232	Yes	0.85
	70	226	223	Yes	0.83	238	232	Yes	0.98
	75	228	223	Yes	0.94	241	232	Yes	>0.99
	80	231	223	Yes	0.99	244	232	Yes	>0.99
	85	234	223	Yes	>0.99	247	232	Yes	>0.99
	90	238	223	Yes	>0.99	251	232	Yes	>0.99
	95	243	223	Yes	>0.99	258	232	Yes	>0.99
8	5	194	225	No	<0.01	199	237	No	<0.01
	10	200	225	No	<0.01	206	237	No	<0.01
	15	204	225	No	<0.01	211	237	No	<0.01
	20	207	225	No	<0.01	215	237	No	<0.01
	25	209	225	No	<0.01	218	237	No	<0.01
	30	212	225	No	<0.01	221	237	No	<0.01
	35	214	225	No	<0.01	224	237	No	<0.01
	40	216	225	No	<0.01	226	237	No	<0.01
	45	218	225	No	0.01	229	237	No	<0.01
	50	220	225	No	0.06	231	237	No	0.02
	55	222	225	No	0.17	233	237	No	0.08
	60	224	225	No	0.38	236	237	No	0.37
	65	226	225	Yes	0.62	238	237	Yes	0.63
	70	228	225	Yes	0.83	241	237	Yes	0.92
	75	231	225	Yes	0.97	244	237	Yes	0.99
	80	233	225	Yes	0.99	247	237	Yes	>0.99
	85	236	225	Yes	>0.99	251	237	Yes	>0.99
	90	240	225	Yes	>0.99	255	237	Yes	>0.99
	95	246	225	Yes	>0.99	262	237	Yes	>0.99

*Prob. = Probability of obtaining proficient status on the NSCAS test in the spring.

Table 3.8. Probability of Reaching On Track Proficiency on NSCAS when MAP Growth is taken in the Fall or Winter—ELA/Reading

		ELA/Reading (Fall)				ELA/Reading (Winter)			
			Projected Proficiency				Projected Proficiency		
Grade	Start Percentile	Fall RIT	Spring Cut	On Track	Prob.*	Winter RIT	Spring Cut	On Track	Prob.*
3	5	162	201	No	<0.01	171	201	No	<0.01
	10	168	201	No	<0.01	176	201	No	<0.01
	15	172	201	No	0.01	180	201	No	<0.01
	20	175	201	No	0.03	183	201	No	<0.01
	25	178	201	No	0.06	185	201	No	0.01
	30	180	201	No	0.10	188	201	No	0.04
	35	182	201	No	0.13	190	201	No	0.06
	40	184	201	No	0.20	192	201	No	0.13
	45	186	201	No	0.29	194	201	No	0.22
	50	188	201	No	0.34	196	201	No	0.35
	55	190	201	No	0.44	198	201	Yes	0.50
	60	192	201	Yes	0.56	199	201	Yes	0.58
	65	194	201	Yes	0.61	201	201	Yes	0.72
	70	197	201	Yes	0.76	204	201	Yes	0.87
	75	199	201	Yes	0.84	206	201	Yes	0.91
	80	202	201	Yes	0.90	208	201	Yes	0.96
	85	205	201	Yes	0.95	211	201	Yes	0.99
	90	209	201	Yes	0.98	215	201	Yes	>0.99
	95	214	201	Yes	>0.99	221	201	Yes	>0.99
4	5	173	207	No	<0.01	179	207	No	<0.01
	10	178	207	No	<0.01	184	207	No	<0.01
	15	182	207	No	0.01	188	207	No	<0.01
	20	185	207	No	0.04	191	207	No	0.01
	25	188	207	No	0.07	194	207	No	0.02
	30	190	207	No	0.12	196	207	No	0.06
	35	192	207	No	0.18	198	207	No	0.12
	40	194	207	No	0.23	200	207	No	0.22
	45	196	207	No	0.33	202	207	No	0.28
	50	198	207	No	0.44	204	207	No	0.42
	55	200	207	Yes	0.50	205	207	Yes	0.50
	60	202	207	Yes	0.62	207	207	Yes	0.65
	65	204	207	Yes	0.73	209	207	Yes	0.78
	70	206	207	Yes	0.82	211	207	Yes	0.88
	75	209	207	Yes	0.88	214	207	Yes	0.96
	80	211	207	Yes	0.93	216	207	Yes	0.98
	85	214	207	Yes	0.96	219	207	Yes	0.99
	90	218	207	Yes	0.99	223	207	Yes	>0.99
	95	224	207	Yes	>0.99	228	207	Yes	>0.99

Grade	Start Percentile	ELA/Reading (Fall)				ELA/Reading (Winter)			
			Projected Proficiency				Projected Proficiency		
		Fall RIT	Spring Cut	On Track	Prob.*	Winter RIT	Spring Cut	On Track	Prob.*
5	5	181	215	No	<0.01	186	215	No	<0.01
	10	186	215	No	<0.01	191	215	No	<0.01
	15	190	215	No	0.01	195	215	No	<0.01
	20	193	215	No	0.02	197	215	No	<0.01
	25	195	215	No	0.04	200	215	No	0.01
	30	198	215	No	0.07	202	215	No	0.02
	35	200	215	No	0.12	204	215	No	0.04
	40	202	215	No	0.19	206	215	No	0.09
	45	204	215	No	0.23	208	215	No	0.17
	50	206	215	No	0.33	210	215	No	0.28
	55	208	215	No	0.44	212	215	No	0.42
	60	210	215	Yes	0.56	214	215	Yes	0.58
	65	212	215	Yes	0.62	215	215	Yes	0.65
	70	214	215	Yes	0.72	218	215	Yes	0.83
	75	216	215	Yes	0.81	220	215	Yes	0.88
	80	218	215	Yes	0.85	222	215	Yes	0.94
	85	221	215	Yes	0.93	225	215	Yes	0.98
	90	225	215	Yes	0.97	229	215	Yes	>0.99
	95	231	215	Yes	>0.99	234	215	Yes	>0.99
6	5	186	220	No	<0.01	190	220	No	<0.01
	10	192	220	No	<0.01	196	220	No	<0.01
	15	196	220	No	0.01	199	220	No	<0.01
	20	198	220	No	0.01	202	220	No	<0.01
	25	201	220	No	0.03	204	220	No	<0.01
	30	203	220	No	0.06	207	220	No	0.02
	35	205	220	No	0.10	209	220	No	0.04
	40	207	220	No	0.12	211	220	No	0.09
	45	209	220	No	0.19	212	220	No	0.12
	50	211	220	No	0.28	214	220	No	0.22
	55	213	220	No	0.39	216	220	No	0.28
	60	215	220	No	0.44	218	220	No	0.42
	65	217	220	Yes	0.56	220	220	Yes	0.58
	70	219	220	Yes	0.67	222	220	Yes	0.72
	75	221	220	Yes	0.72	224	220	Yes	0.83
	80	224	220	Yes	0.84	226	220	Yes	0.91
	85	226	220	Yes	0.90	229	220	Yes	0.97
	90	230	220	Yes	0.96	233	220	Yes	>0.99
	95	236	220	Yes	>0.99	238	220	Yes	>0.99

Grade	Start Percentile	ELA/Reading (Fall)				ELA/Reading (Winter)			
			Projected Proficiency				Projected Proficiency		
		Fall RIT	Spring Cut	On Track	Prob.*	Winter RIT	Spring Cut	On Track	Prob.*
7	5	189	223	No	<0.01	192	223	No	<0.01
	10	195	223	No	<0.01	198	223	No	<0.01
	15	199	223	No	<0.01	201	223	No	<0.01
	20	202	223	No	0.01	204	223	No	<0.01
	25	204	223	No	0.02	207	223	No	<0.01
	30	206	223	No	0.04	209	223	No	0.01
	35	209	223	No	0.07	211	223	No	0.03
	40	211	223	No	0.12	213	223	No	0.04
	45	213	223	No	0.19	215	223	No	0.09
	50	214	223	No	0.23	217	223	No	0.17
	55	216	223	No	0.28	219	223	No	0.28
	60	218	223	No	0.39	221	223	No	0.42
	65	220	223	Yes	0.50	223	223	Yes	0.58
	70	222	223	Yes	0.61	225	223	Yes	0.72
	75	225	223	Yes	0.72	227	223	Yes	0.83
	80	227	223	Yes	0.81	230	223	Yes	0.94
	85	230	223	Yes	0.90	232	223	Yes	0.96
	90	234	223	Yes	0.96	236	223	Yes	0.99
	95	240	223	Yes	>0.99	242	223	Yes	>0.99
8	5	191	225	No	<0.01	194	225	No	<0.01
	10	197	225	No	<0.01	199	225	No	<0.01
	15	201	225	No	0.01	203	225	No	<0.01
	20	204	225	No	0.02	206	225	No	<0.01
	25	207	225	No	0.04	209	225	No	<0.01
	30	209	225	No	0.06	211	225	No	0.01
	35	211	225	No	0.10	213	225	No	0.02
	40	213	225	No	0.13	215	225	No	0.05
	45	215	225	No	0.19	217	225	No	0.10
	50	217	225	No	0.26	219	225	No	0.18
	55	219	225	No	0.35	221	225	No	0.29
	60	221	225	No	0.40	223	225	No	0.43
	65	223	225	Yes	0.50	225	225	Yes	0.57
	70	225	225	Yes	0.60	227	225	Yes	0.71
	75	228	225	Yes	0.69	229	225	Yes	0.82
	80	230	225	Yes	0.78	232	225	Yes	0.90
	85	234	225	Yes	0.90	235	225	Yes	0.97
	90	237	225	Yes	0.94	239	225	Yes	0.99
	95	243	225	Yes	0.99	244	225	Yes	>0.99

*Prob. = Probability of obtaining proficient status on the NSCAS test in the spring.

Table 3.9. Probability of Reaching On Track Proficiency on NSCAS when MAP Growth is taken in the Fall or Winter—Mathematics

		Mathematics (Fall)				Mathematics (Winter)			
			Projected Proficiency				Projected Proficiency		
Grade	Start Percentile	Fall RIT	Spring Cut	On Track	Prob.*	Winter RIT	Spring Cut	On Track	Prob.*
3	5	169	205	No	<0.01	176	201	No	<0.01
	10	174	205	No	<0.01	181	201	No	<0.01
	15	177	205	No	0.01	184	201	No	0.01
	20	179	205	No	0.03	187	201	No	0.03
	25	182	205	No	0.08	189	201	No	0.07
	30	184	205	No	0.11	191	201	No	0.14
	35	185	205	No	0.14	193	201	No	0.26
	40	187	205	No	0.22	195	201	No	0.42
	45	189	205	No	0.32	197	201	Yes	0.58
	50	190	205	No	0.38	198	201	Yes	0.66
	55	192	205	Yes	0.50	200	201	Yes	0.80
	60	194	205	Yes	0.62	202	201	Yes	0.90
	65	195	205	Yes	0.68	203	201	Yes	0.93
	70	197	205	Yes	0.78	205	201	Yes	0.97
	75	199	205	Yes	0.83	207	201	Yes	0.99
	80	201	205	Yes	0.89	209	201	Yes	>0.99
	85	204	205	Yes	0.96	212	201	Yes	>0.99
	90	207	205	Yes	0.99	215	201	Yes	>0.99
	95	212	205	Yes	>0.99	220	201	Yes	>0.99
4	5	179	215	No	<0.01	185	207	No	<0.01
	10	184	215	No	<0.01	190	207	No	0.01
	15	188	215	No	0.01	194	207	No	0.05
	20	190	215	No	0.02	197	207	No	0.14
	25	193	215	No	0.06	199	207	No	0.26
	30	195	215	No	0.11	201	207	No	0.42
	35	197	215	No	0.17	203	207	Yes	0.58
	40	198	215	No	0.22	205	207	Yes	0.74
	45	200	215	No	0.32	207	207	Yes	0.86
	50	202	215	No	0.44	209	207	Yes	0.93
	55	204	215	Yes	0.56	211	207	Yes	0.97
	60	205	215	Yes	0.56	212	207	Yes	0.98
	65	207	215	Yes	0.68	214	207	Yes	0.99
	70	209	215	Yes	0.78	216	207	Yes	>0.99
	75	211	215	Yes	0.86	218	207	Yes	>0.99
	80	214	215	Yes	0.94	221	207	Yes	>0.99
	85	216	215	Yes	0.97	223	207	Yes	>0.99
	90	220	215	Yes	0.99	227	207	Yes	>0.99
	95	225	215	Yes	>0.99	232	207	Yes	>0.99

Grade	Start Percentile	Mathematics (Fall)				Mathematics (Winter)			
		Fall RIT	Projected Proficiency			Winter RIT	Projected Proficiency		
			Spring Cut	On Track	Prob.*		Spring Cut	On Track	Prob.*
5	5	187	224	No	<0.01	192	215	No	<0.01
	10	193	224	No	<0.01	198	215	No	<0.01
	15	196	224	No	<0.01	201	215	No	0.02
	20	199	224	No	0.01	204	215	No	0.07
	25	202	224	No	0.04	207	215	No	0.20
	30	204	224	No	0.07	209	215	No	0.34
	35	206	224	No	0.12	211	215	Yes	0.50
	40	208	224	No	0.19	213	215	Yes	0.66
	45	210	224	No	0.28	215	215	Yes	0.80
	50	211	224	No	0.33	217	215	Yes	0.89
	55	213	224	No	0.44	219	215	Yes	0.95
	60	215	224	Yes	0.56	221	215	Yes	0.98
	65	217	224	Yes	0.67	223	215	Yes	0.99
	70	219	224	Yes	0.77	225	215	Yes	>0.99
	75	221	224	Yes	0.85	228	215	Yes	>0.99
	80	224	224	Yes	0.93	230	215	Yes	>0.99
	85	227	224	Yes	0.97	233	215	Yes	>0.99
	90	230	224	Yes	0.99	237	215	Yes	>0.99
	95	236	224	Yes	>0.99	242	215	Yes	>0.99
6	5	192	226	No	<0.01	196	220	No	<0.01
	10	198	226	No	<0.01	202	220	No	<0.01
	15	202	226	No	0.01	205	220	No	0.01
	20	205	226	No	0.03	209	220	No	0.05
	25	207	226	No	0.05	211	220	No	0.11
	30	209	226	No	0.09	214	220	No	0.27
	35	212	226	No	0.19	216	220	No	0.42
	40	214	226	No	0.28	218	220	Yes	0.58
	45	216	226	No	0.38	220	220	Yes	0.73
	50	218	226	Yes	0.5	222	220	Yes	0.85
	55	220	226	Yes	0.62	224	220	Yes	0.93
	60	222	226	Yes	0.72	226	220	Yes	0.97
	65	224	226	Yes	0.81	228	220	Yes	0.99
	70	226	226	Yes	0.88	230	220	Yes	>0.99
	75	228	226	Yes	0.93	233	220	Yes	>0.99
	80	231	226	Yes	0.97	236	220	Yes	>0.99
	85	234	226	Yes	0.99	239	220	Yes	>0.99
	90	238	226	Yes	>0.99	243	220	Yes	>0.99
	95	243	226	Yes	>0.99	248	220	Yes	>0.99

Grade	Start Percentile	Mathematics (Fall)				Mathematics (Winter)			
		Fall RIT	Projected Proficiency			Winter RIT	Projected Proficiency		
			Spring Cut	On Track	Prob.*		Spring Cut	On Track	Prob.*
7	5	195	232	No	<0.01	198	223	No	<0.01
	10	201	232	No	<0.01	204	223	No	<0.01
	15	205	232	No	<0.01	208	223	No	<0.01
	20	209	232	No	<0.01	212	223	No	0.03
	25	211	232	No	0.01	215	223	No	0.10
	30	214	232	No	0.03	217	223	No	0.20
	35	216	232	No	0.06	220	223	No	0.42
	40	218	232	No	0.11	222	223	Yes	0.58
	45	221	232	No	0.22	224	223	Yes	0.74
	50	223	232	No	0.32	226	223	Yes	0.85
	55	225	232	No	0.44	228	223	Yes	0.93
	60	227	232	Yes	0.56	230	223	Yes	0.97
	65	229	232	Yes	0.68	233	223	Yes	0.99
	70	231	232	Yes	0.78	235	223	Yes	>0.99
	75	234	232	Yes	0.89	238	223	Yes	>0.99
	80	237	232	Yes	0.95	240	223	Yes	>0.99
	85	240	232	Yes	0.98	244	223	Yes	>0.99
	90	244	232	Yes	>0.99	248	223	Yes	>0.99
	95	250	232	Yes	>0.99	254	223	Yes	>0.99
8	5	197	237	No	<0.01	199	225	No	<0.01
	10	203	237	No	<0.01	206	225	No	<0.01
	15	208	237	No	<0.01	210	225	No	<0.01
	20	211	237	No	<0.01	214	225	No	0.04
	25	214	237	No	0.01	217	225	No	0.12
	30	217	237	No	0.02	220	225	No	0.28
	35	219	237	No	0.04	222	225	No	0.42
	40	222	237	No	0.1	225	225	Yes	0.65
	45	224	237	No	0.15	227	225	Yes	0.79
	50	226	237	No	0.22	229	225	Yes	0.88
	55	229	237	No	0.35	231	225	Yes	0.94
	60	231	237	No	0.45	234	225	Yes	0.99
	65	233	237	Yes	0.55	236	225	Yes	>0.99
	70	236	237	Yes	0.65	239	225	Yes	>0.99
	75	238	237	Yes	0.74	241	225	Yes	>0.99
	80	241	237	Yes	0.85	245	225	Yes	>0.99
	85	245	237	Yes	0.94	248	225	Yes	>0.99
	90	249	237	Yes	0.98	253	225	Yes	>0.99
	95	256	237	Yes	>0.99	259	225	Yes	>0.99

*Prob. = Probability of obtaining proficient status on the NSCAS test in the spring.

4. References

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Appendix A: Students with High MAP Growth Scores but Low NSCAS Scores

Table A.1 presents the number of students who had high MAP Growth scores but low NSCAS scores by demographics (i.e., their MAP Growth score did not accurately predict their performance on the NSCAS Summative test). Out of the 167,749 students included in this linking study sample across both content areas, 222 of them received a lower NSCAS score than predicted by their MAP Growth score (i.e., less than 1% of the study sample). Most of these cases occurred for the NSCAS ELA assessment. It may be the difference in what is measured between the two assessments is contributing to these cases. Teachers of these students may wish to compare the students reading ability and their writing ability in the classroom as a follow-up investigation given that MAP Growth Reading does not measure writing skills whereas NSCAS ELA does.

Table A.1. Number of Students with High MAP Growth, Low NSCAS Scores by Demographics

	Number of Students*															
		Gender		ELL			Ethnicity									
Grade	Total	F	M	1	2	3	White	Black	Hispanic	Asian	AI/AN	NH/PI	MR	IEP	FRL	Disability
ELA																
3	40	14	26	3	2	35	29	2	4	2	--	--	3	6	14	6
4	25	9	16	1	2	22	19	1	4	--	--	--	1	3	11	3
5	31	12	19	--	4	27	--	2	4	1	1	23	--	3	12	3
6	50	21	29	--	2	47	42	3	3	--	--	--	2	5	18	6
7	40	14	26	--	4	35	27	1	5	1	1	--	4	2	12	3
8	24	9	15	--	4	20	14	1	6	2	--	--	1	2	10	2
Total	210	79	131	4	18	186	131	10	26	6	2	23	11	21	77	23
Mathematics																
3	4	1	3	--	--	3	3	--	--	--	--	--	--	2	1	3
4	2	--	2	--	--	2	2	--	--	--	--	--	--	1	--	1
5	1	1		--	--	1	1	--	--	--	--	--	--	--	--	--
6	3	2	1	--	--	3	3	--	--	--	--	--	--	--	--	--
7	2	1	1	--	--	2	1	--	--	--	1	--	--	2	1	2
8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total	12	5	7	--	--	11	10	--	--	--	1	--	--	5	2	6

*F = female. M = male. ELL = English language learner. 1 = Current ELL. 2 = Former ELL. 3 = Non-ELL. AI/AN = American Indian/Alaska Native. NH/PI = Native Hawaiian or Other Pacific Islander. MR = Multiracial. IEP = Individual Education Plan. FRL = Free and reduced lunch.

Appendix B: MAP Growth Scores that Predict Low, Moderate, and High Probabilities of NSCAS Proficiency

Table B.1 presents the MAP Growth Spring RIT score ranges that predict whether students are on track to reach proficiency (i.e., On Track or CCR Benchmark achievement levels) on the NSCAS Summative ELA and Mathematics Grades 3–8 assessments based on low, moderate, and high probabilities:

- Low = less than a 50% chance of being "On Track or Above"
- Moderate = between 50% and 75% chance of being On Track or Above
- High = greater than a 75% chance of being On Track or Above

For example, if an ELA Grade 3 student received a MAP Growth Reading RIT score of 209 in the spring, they would have greater than a 75% chance of being proficient on the NSCAS assessment. Teachers who are looking for a higher likelihood of On Track or Above would want to use scores in the high probability range.

Table B.1. MAP Growth Spring RIT Score Ranges that Predict Low, Moderate, and High Probabilities of NSCAS Proficiency

Grade	Low	Moderate	High
ELA/Reading			
3	100–200	201–203	204–350
4	100–206	207–209	210–350
5	100–214	215–217	218–350
6	100–219	220–222	223–350
7	100–222	223–225	226–350
8	100–224	225–227	228–350
Mathematics			
3	100–204	205–206	207–350
4	100–214	215–216	217–350
5	100–223	224–225	226–350
6	100–225	226–227	228–350
7	100–231	232–233	234–350
8	100–236	237–238	239–350