

2017 Concordance Study: Linking the Texas STAAR Scales to the NWEA MAP Growth Scales

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1. Introduction

1.1. Purpose of the Study

NWEA™ is committed to providing partners with useful tools to help make inferences from the MAP® Growth™ interim assessment scores. One important tool is the concordance table between MAP Growth and state summative assessments. Concordance tables, typically derived from statistical linking procedures, provide a direct link between scores on different tests that measure similar but distinct constructs. Aside from describing how a score on one test relates to performance on another test, these tables can also be used to identify benchmark scores on one test corresponding to performance categories on another test, or to maintain continuity of scores on a test after the test is redesigned or changed. Concordance tables are helpful for educators, parents, administrators, researchers, and policymakers to evaluate and formulate academic standing and growth.

This document presents the results of a concordance study conducted by NWEA in November 2017 to connect the scales of the State of Texas Assessments of Academic Readiness™ (STAAR™) assessments with those of the MAP Growth assessments. Specifically, this report presents the following:

- The cut scores on the MAP Growth Reading and Mathematics scales for grades 2–8 and on the Science scale for grades 5 and 8 that correspond to the benchmarks on the STAAR Reading, Mathematics, and Science tests
- The consistency rate of classification based on the estimated MAP Growth cut scores
- The probability of receiving a Level 3 (i.e., “meets” grade level) or higher performance designation on the STAAR assessments based on the observed MAP Growth scores taken during the same school year

1.2. Assessment Overview

1.2.1. State of Texas Assessments of Academic Readiness (STAAR)

STAAR includes a series of vertically scaled achievement tests aligned to the Texas state curriculum, the Texas Essential Knowledge and Skills (TEKS), in Mathematics and Reading for grades 3-8, Writing for grades 4 and 7, Science for grades 5 and 8, Social Science for grade 8, and end-of-course assessments for English I, English II, Algebra I, Biology, and U.S. History. STAAR tests can be delivered online and in paper-pencil form. For each grade and content area, there are three cut scores that distinguish between performance levels—Level 1: Did Not Meet Grade Level, Level 2: Approaches Grade Level, Level 3: Meets Grade Level, and Level 4: Masters Grade Level. The Level 3 cut score demarks the minimum level of performance considered to be “proficient” for accountability purposes.

1.2.2. MAP Growth

MAP Growth tests are adaptive interim assessments aligned to the TEKS standards. They are constructed to measure student achievement from grades K–12 in Mathematics, Reading, Language Usage, and Science. MAP Growth scores are reported on a vertical Rasch Unit (RIT) scale with a range of 100 to 350. Each content area has its own RIT scale. To aid interpretation of MAP Growth scores, NWEA periodically conducts norming studies of student and school performance on MAP Growth. For example, the 2015 RIT scale 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. Data and Analysis

2.1. Data

Data used in this study were collected from 351 schools in Texas for students in grades 3–8. The sample contained 111,980 students for Reading, 112,322 students for Mathematics, and 17,674 students for Science who took both the MAP Growth and STAAR tests in Spring 2017.

Table 2.1 provides the demographics of the study sample. For all content areas, most students were Hispanic, followed by White, Black, and Asian/Pacific Islander (Asian/PI). Males made up slightly more of the study sample than females.

To understand the statistical characteristics of the test scores, Table 2.2 provides descriptive statistics, including the correlation coefficient (r), the mean, standard deviation (SD), minimum, and maximum. As shown in the table, the correlation coefficients between MAP Growth and STAAR scores range from 0.73 – 0.80 for Reading, 0.73 – 0.84 for Mathematics, and 0.78 – 0.79 for Science. In general, these correlations indicate a strong relationship between MAP Growth and STAAR test scores.

Table 2.1. Demographics of the Study Sample

Content Area	Grade	N	Race/Ethnicity*						Gender	
			Hispanic	White	Black	Asian/PI	AI/AN	Other	Male	Female
Reading	3	21,354	48.6%	21.6%	14.2%	10.1%	3.1%	2.5%	51.4%	48.6%
	4	22,182	50.6%	21.0%	14.0%	9.6%	2.5%	2.2%	51.3%	48.7%
	5	21,296	48.5%	19.5%	15.0%	10.3%	4.5%	2.1%	50.2%	49.8%
	6	20,301	50.3%	16.7%	15.2%	10.9%	4.9%	2.0%	51.4%	48.6%
	7	17,464	51.5%	13.3%	16.5%	11.2%	5.5%	2.0%	52.1%	47.9%
	8	9,725	61.9%	13.1%	14.8%	5.5%	3.4%	1.4%	53.0%	47.0%
Mathematics	3	21,045	49.1%	21.4%	14.1%	10.0%	3.1%	2.4%	51.4%	48.6%
	4	21,951	51.0%	20.8%	14.0%	9.6%	2.5%	2.2%	51.4%	48.6%
	5	21,075	48.6%	19.6%	15.0%	10.3%	4.5%	2.1%	50.2%	49.8%
	6	19,463	49.3%	18.2%	15.2%	10.6%	4.8%	2.0%	51.4%	48.6%
	7	17,149	51.5%	15.1%	15.5%	10.6%	5.4%	1.9%	52.0%	48.0%
	8	11,297	63.3%	13.6%	13.7%	4.4%	3.8%	1.1%	54.0%	46.0%
Science	5	13,454	41.9%	20.9%	15.3%	13.0%	6.7%	2.2%	50.2%	49.8%
	8	4,220	58.2%	6.6%	15.6%	10.5%	7.4%	1.8%	51.7%	48.3%

*Asian/PI = Asian/Pacific Islander. AI/AN = American Indian/Alaska Native.

Table 2.2. Descriptive Statistics of STAAR and MAP Growth Scores from the Study Sample

Content Area	Grade	N	<i>r</i>	STAAR				MAP Growth			
				Mean	SD	Min.	Max.	Mean	SD	Min.	Max.
Reading	3	21,354	0.78	1478.3	162.9	826	1889	206.0	14.3	135	280
	4	22,182	0.83	1568.5	159.2	944	1997	216.0	16.3	140	305
	5	21,296	0.84	1634.9	155.9	963	2062	223.6	17.4	144	298
	6	20,301	0.80	1629.8	150.0	1068	2137	222.7	18.8	143	304
	7	17,464	0.80	1650.7	140.8	1078	2169	225.1	20.6	136	309
	8	9,725	0.73	1639.8	121.4	1039	2172	221.1	19.1	136	284
Mathematics	3	21,045	0.77	1438.9	165.4	765	1893	199.0	16.4	138	249
	4	21,951	0.80	1512.5	155.4	842	1971	206.0	16.8	129	256
	5	21,075	0.77	1559.9	148.8	870	1996	212.0	16.4	141	259
	6	19,463	0.77	1571.5	143.9	905	2054	212.0	18.7	142	261
	7	17,149	0.76	1625.5	139.0	969	2116	213.9	19.8	138	264
	8	11,297	0.73	1633.4	127.1	968	2147	212.6	19.2	139	270
Science	5	13,454	0.78	3857.9	524.7	1174	5566	211.8	13.1	157	255
	8	4,220	0.79	3702.6	582.2	2209	6202	211.4	16.0	153	268

2.2. Equipercentile Linking Procedure

The equipercentile procedure (e.g., Kolen & Brennan, 2004) was used to establish the concordance relationship between STAAR and MAP Growth scores. This procedure matches scores on the two scales that have the same percentile rank (i.e., the proportion of scores at or below each score).

Consider the concorded scores between two tests. x is a score on Test X (e.g., STAAR). 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 on STAAR 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.

2.3. Consistency Rate of Classification

Consistency rate of classification accuracy, expressed in the form of a rate between 0 and 1, measures the extent to which MAP Growth scores (and the estimated MAP Growth cut scores) accurately predicted whether students in the sample would pass (i.e., achieve Level 3 or higher) on STAAR tests.

To calculate consistency rate of classification, sample students were designated “Below STAAR cut” or “At or Above STAAR cut” based on their actual STAAR scores. Similarly, they were also designated as “Below MAP Growth cut” or “At or Above MAP Growth cut” based on their actual MAP Growth scores. A two-way contingency table was then tabulated (see Table 2.3),

classifying students as “proficient” based on the STAAR cut score and concordant MAP Growth cut score. Students were classified as true positive (TP), true negative (TN), false positive (FP), or false negative (FN). The overall consistency rate of classification was computed as the proportion of correct classifications among the entire sample by $(TP+TN) / (TP+TN+FP+FN)$.

- Students classified in the true positive (TP) category were those predicted to be proficient based on both the MAP Growth cut scores and STAAR cut scores.
- Students classified in the true negative (TN) category were those predicted to be not proficient based on both the MAP Growth cut scores and STAAR cut scores.
- Students classified in the false positive (FP) category were those predicted to be proficient based on the MAP Growth cut scores but were classified as not proficient based on the STAAR cut scores.
- Students classified in the false negative (FN) category were those predicted to be not proficient based on the MAP Growth cut scores but were classified as proficient based on the STAAR cut scores.

Table 2.3. Definition of Consistency Rate for STAAR to MAP Growth Concordance

	Below STAAR Cut	At or Above STAAR Cut
Below MAP Growth Cut	True Negative*	False Negative
At or Above MAP Growth Cut	False Positive	True Positive*

*Shaded cells are summed to compute the consistency rate.

2.4. Proficiency Projection

MAP Growth conditional growth norms provide students’ expected score gains across testing seasons (Thum & Hauser, 2015). This information is used to predict a student’s performance on STAAR based on that student’s MAP Growth scores from prior seasons (e.g., fall and winter). The probability of a student achieving Level 3 (“meets” grade level) on STAAR based on his or her fall or winter MAP Growth score is given in Equation 2:

$$Pr(\text{Achieving Level 3 in spring} | a \text{ RIT score of } x) = \Phi\left(\frac{x+g-c}{SD}\right) \quad (2)$$

where, Φ is a standardized normal cumulative distribution, x is the student’s RIT score in fall or winter, g is the expected growth from fall or winter to spring corresponding to x , c is the MAP Growth cut score for spring, and SD is the conditional standard deviation of growth from fall or winter to spring.

The probability of a student achieving Level 3 on the STAAR test based on his or her spring score s can be calculated by Equation 3:

$$Pr(\text{Achieving Level 3 in spring} | a \text{ RIT score of } s \text{ in spring}) = \Phi\left(\frac{s-c}{SE}\right) \quad (3)$$

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

3. Estimated MAP Growth Cut Scores Associated with STAAR Readiness Levels

Table 3.1 –

Table 3.6 present the STAAR scale scores associated with each performance level, as well as the estimated score range on the MAP Growth tests associated with each performance level. Specifically, Table 3.1 – Table 3.3 apply to MAP Growth scores obtained during the spring testing season for Reading, Mathematics, and Science, respectively. Table 3.4 –

Table 3.6 apply to MAP Growth tests taken in fall or winter prior to the testing season for each content area.

The tables also report the percentile rank (based on the NWEA 2015 MAP Growth norms) associated with each estimated MAP Growth cut score. These scores can be used to predict students' most probable STAAR performance level. For example, a grade 6 student who obtained a MAP Growth Mathematics score of 240 in the spring is likely to be at the high end of Level 3 (Meets) on the STAAR taken during that same testing season (see Table 3.2). Similarly, a grade 3 student who obtained a MAP Growth Reading score of 210 in the fall is likely to be at Level 4 (Masters) on the STAAR taken in the spring of grade 3 (see Table 3.4).

Table 3.1. Concordance of Performance Level Score Ranges between STAAR and MAP Growth when MAP Growth is taken in Spring—Reading

STAAR Reading				
Grade	Level 1: Did Not Meet	Level 2: Approaches	Level 3: Meets*	Level 4: Masters
3	765–1344	1345–1467	1468 –1554	1555–1893
4	842–1433	1434–1549	1550 –1632	1633–1971
5	870–1469	1470–1581	1582 –1666	1667–1998
6	905–1516	1517–1628	1629 –1717	1718–2054
7	969–1566	1567–1673	1674 –1752	1753–2116
8	968–1586	1587–1699	1700 –1782	1783–2153

MAP Growth Reading								
Grade	Level 1: Did Not Meet		Level 2: Approaches		Level 3: Meets		Level 4: Masters	
	RIT	Percentile	RIT	Percentile	RIT*	Percentile	RIT	Percentile
2**	100–181	1–31	182–193	32–62	194 –200	63–78	201–350	79–99
3	100–191	1–31	192–203	32–62	204 –210	63–78	211–350	79–99
4	100–199	1–33	200–211	34–64	212 –218	65–80	219–350	81–99
5	100–204	1–31	205–216	32–62	217 –223	63–78	224–350	79–99
6	100–208	1–31	209–221	32–65	222 –229	66–82	230–350	83–99
7	100–208	1–26	209–222	27–61	223 –231	62–81	232–350	82–99
8	100–208	1–23	209–223	24–58	224 –232	59–78	233–350	79–99

*Bolted numbers indicate the cut scores considered to be at least “proficient” for accountability purposes (i.e., “meets” grade level).

**Highlighted text denotes grade 2 benchmarks are extrapolated from grade 3 cut scores.

Table 3.2. Concordance of Performance Level Score Ranges between STAAR and MAP Growth when MAP Growth is taken in Spring—Mathematics

STAAR Mathematics								
Grade	Level 1: Did Not Meet		Level 2: Approaches		Level 3: Meets*		Level 4: Masters	
3	826–1359		1360–1485		1468–1595		1596–1889	
4	944–1466		1467–1588		1589–1669		1670–1997	
5	963–1499		1500–1624		1625–1723		1724–2062	
6	1068–1535		1536–1652		1653–1771		1772–2137	
7	1078–1574		1575–1687		1688–1797		1798–2169	
8	1034–1594		1595–1699		1700–1853		1854–2172	
MAP Growth Mathematics								
Grade	Level 1: Did Not Meet		Level 2: Approaches		Level 3: Meets		Level 4: Masters	
	RIT	Percentile	RIT	Percentile	RIT*	Percentile	RIT	Percentile
2**	100–184	1–28	185–195	29–59	196–204	60–81	205–350	82–99
3	100–196	1–30	197–207	31–61	208–216	62–82	217–350	83–99
4	100–207	1–34	208–219	35–65	220–226	66–80	227–350	81–99
5	100–208	1–21	209–224	22–57	225–234	58–79	235–350	80–99
6	100–212	1–22	213–228	23–57	229–240	58–81	241–350	82–99
7	100–216	1–24	217–233	25–60	234–246	61–84	247–350	85–99
8	100–216	1–22	217–233	23–55	234–249	56–83	250–350	84–99

*Bolted numbers indicate the cut scores considered to be at least “proficient” for accountability purposes (i.e., “meets” grade level).

**Highlighted text denotes grade 2 benchmarks are extrapolated from grade 3 cut scores.

Table 3.3. Concordance of Performance Level Score Ranges between STAAR and MAP Growth when MAP Growth is taken in Spring—Science

STAAR Science								
Grade	Level 1: Did Not Meet		Level 2: Approaches		Level 3: Meets*		Level 4: Masters	
5	1174–3549		3550–3999		4000–4401		4402–5566	
8	793–3549		3550–3999		4000–4405		4406–6202	
MAP Growth Science								
Grade	Level 1: Did Not Meet		Level 2: Approaches		Level 3: Meets		Level 4: Masters	
	RIT	Percentile	RIT	Percentile	RIT*	Percentile	RIT	Percentile
5	100–205	1–49	206–216	50–83	217–224	84–95	225–350	96–99
8	100–208	1–34	209–220	35–70	221–229	71–89	230–350	90–99

*Bolted numbers indicate the cut scores considered to be at least “proficient” for accountability purposes (i.e., “meets” grade level).

Table 3.4. Concordance of Performance Level Score Ranges between STAAR and MAP Growth when MAP Growth is taken in Fall or Winter—Reading

STAAR Reading								
Grade	Level 1: Did Not Meet		Level 2: Approaches		Level 3: Meets*		Level 4: Masters	
3	765–1344		1345–1467		1468–1554		1555–1893	
4	842–1433		1434–1549		1550–1632		1633–1971	
5	870–1469		1470–1581		1582–1666		1667–1998	
6	905–1516		1517–1628		1629–1717		1718–2054	
7	969–1566		1567–1673		1674–1752		1753–2116	
8	968–1586		1587–1699		1700–1782		1783–2153	
MAP Growth Reading (Fall)								
Grade	Level 1: Did Not Meet		Level 2: Approaches		Level 3: Meets		Level 4: Masters	
	RIT	Percentile	RIT	Percentile	RIT*	Percentile	RIT	Percentile
2**	100–166	1–29	167–180	30–64	181–188	65–81	189–350	82–99
3	100–179	1–28	180–194	29–65	195–202	66–81	203–350	82–99
4	100–190	1–31	191–204	32–65	205–212	66–82	213–350	83–99
5	100–197	1–29	198–211	30–64	212–219	65–81	220–350	82–99
6	100–202	1–28	203–217	29–66	218–226	67–85	227–350	86–99
7	100–203	1–23	204–219	24–62	220–229	63–83	230–350	84–99
8	100–203	1–19	204–221	20–60	222–230	61–80	231–350	81–99
MAP Growth Reading (Winter)								
Grade	Level 1: Did Not Meet		Level 2: Approaches		Level 3: Meets		Level 4: Masters	
	RIT	Percentile	RIT	Percentile	RIT*	Percentile	RIT	Percentile
2**	100–176	1–30	177–189	31–63	190–196	64–79	197–350	80–99
3	100–187	1–29	188–200	30–62	201–208	63–80	209–350	81–99
4	100–196	1–31	197–209	32–65	210–217	66–82	218–350	83–99
5	100–202	1–30	203–214	31–62	215–222	63–80	223–350	81–99
6	100–206	1–29	207–220	30–66	221–228	67–83	229–350	84–99
7	100–206	1–24	207–221	25–62	222–230	63–81	231–350	82–99
8	100–207	1–22	208–222	23–58	223–231	59–79	232–350	80–99

*Bolded numbers indicate the cut scores considered to be at least “proficient” for accountability purposes (i.e., “meets” grade level).

**Highlighted text denotes grade 2 benchmarks are extrapolated from grade 3 cut scores.

Table 3.5. Concordance of Performance Level Score Ranges between STAAR and MAP Growth when MAP Growth is taken in Fall or Winter—Mathematics

STAAR Mathematics								
Grade	Level 1: Did Not Meet		Level 2: Approaches		Level 3: Meets*		Level 4: Masters	
3	826–1359		1360–1485		1486–1595		1596–1889	
4	944–1466		1467–1588		1589–1669		1670–1997	
5	963–1499		1500–1624		1625–1723		1724–2062	
6	1068–1535		1536–1652		1653–1771		1772–2137	
7	1078–1574		1575–1687		1688–1797		1798–2169	
8	1034–1594		1559–1699		1700–1853		1854–2172	
MAP Growth Mathematics (Fall)								
Grade	Level 1: Did Not Meet		Level 2: Approaches		Level 3: Meets		Level 4: Masters	
	RIT	Percentile	RIT	Percentile	RIT*	Percentile	RIT	Percentile
2**	100–168	1–26	169–180	27–60	181–190	61–84	191–350	85–99
3	100–183	1–29	184–194	30–62	195–204	63–85	205–350	86–99
4	100–195	1–31	196–208	32–68	209–215	69–83	216–350	84–99
5	100–198	1–18	199–214	19–58	215–224	59–81	225–350	82–99
6	100–204	1–19	205–220	20–57	221–233	58–84	234–350	85–99
7	100–210	1–23	211–227	24–61	228–240	62–85	241–350	86–99
8	100–211	1–20	212–228	21–54	229–245	55–85	246–350	86–99
MAP Growth Mathematics (Winter)								
Grade	Level 1: Did Not Meet		Level 2: Approaches		Level 3: Meets		Level 4: Masters	
	RIT	Percentile	RIT	Percentile	RIT*	Percentile	RIT	Percentile
2**	100–178	1–27	179–189	28–59	190–199	60–84	200–350	85–99
3	100–191	1–30	192–202	31–62	203–211	63–84	212–350	85–99
4	100–202	1–33	203–214	34–65	215–221	66–81	222–350	82–99
5	100–204	1–20	205–220	21–58	221–230	59–80	231–350	81–99
6	100–209	1–21	210–225	22–58	226–237	59–83	238–350	84–99
7	100–214	1–24	215–231	25–62	232–244	63–85	245–350	86–99
8	100–214	1–21	215–231	22–55	232–247	56–84	248–350	85–99

*Bolted numbers indicate the cut scores considered to be at least “proficient” for accountability purposes (i.e., “meets” grade level).

**Highlighted text denotes grade 2 benchmarks are extrapolated from grade 3 cut scores.

Table 3.6. Concordance of Performance Level Score Ranges between STAAR and MAP Growth when MAP Growth is taken in Fall or Winter—Science

STAAR Science									
Grade	Level 1: Did Not Meet		Level 2: Approaches		Level 3: Meets*		Level 4V: Masters		
5	1174–3549		3550–3999		4000–4401		4402–5566		
8	793–3549		3550–3999		4000–4405		4406–6202		
MAP Growth Science (Fall)									
Grade	Level 1: Did Not Meet		Level 2: Approaches		Level 3: Meets		Level 4: Masters		
	RIT	Percentile	RIT	Percentile	RIT*	Percentile	RIT	Percentile	
5	100–199	1–47	200–213	48–88	214–223	89–98	224–350	98–99	
8	100–204	1–31	205–218	32–74	219–229	75–94	230–350	95–99	
MAP Growth Science (Winter)									
Grade	Level 1: Did Not Meet		Level 2: Approaches		Level 3: Meets		Level 4: Masters		
	RIT	Percentile	RIT	Percentile	RIT*	Percentile	RIT	Percentile	
5	100–203	1–49	204–215	50–86	216–224	87–97	225–350	97–99	
8	100–206	1–31	207–219	32–72	220–229	73–92	230–350	93–99	

*Bolted numbers indicate the cut scores considered to be at least “proficient” for accountability purposes (i.e., “meets” grade level).

4. Consistency Rate of Classification

Consistency rate of classification (Pommerich, Hanson, Harris, & Sconing, 2004), expressed in the form of a rate between 0 and 1, provides a means to measure the departure from equity for concordances (Hanson et al., 2001). This index can also be used as an indicator for the predictive validity of the MAP Growth tests (i.e., how accurately the MAP Growth scores can predict a students' proficiency status on the STAAR test).

For each pair of concordant scores, a classification is considered consistent if the student is classified into the same performance category regardless of the test used for decision-making. For the "proficient" performance category concordant scores, the consistency rate can be calculated as the percentage of students who score at or above both concordant scores plus the percentage of students who score below both concordant scores on each test. Higher consistency rate indicates stronger congruence between STAAR and MAP Growth cut scores.

The results in Table 4.1 demonstrate that, on average, MAP Growth Reading scores can consistently classify students' proficiency (Level 3 or higher) status on the STAAR Reading test 84% of the time; MAP Growth Mathematics scores can consistently classify students on the STAAR Mathematics test 86% of the time; and MAP Growth Science scores can consistently classify students on the STAAR Science test 84% of the time. Those numbers are high, suggesting that MAP Growth Reading, Mathematics, and Science tests are good predictors of students' proficiency status on the STAAR tests.

Table 4.1. Consistency Rate of Classification for MAP Growth and STAAR Level 3 Equipercentile Concordances

Grade	Reading			Mathematics			Science		
	Consistency Rate	False*		Consistency Rate	False*		Consistency Rate	False*	
		Pos.	Neg.		Pos.	Neg.		Pos.	Neg.
3	0.83	0.08	0.09	0.83	0.09	0.08	--	--	--
4	0.84	0.07	0.09	0.86	0.07	0.07	--	--	--
5	0.82	0.07	0.11	0.86	0.07	0.07	0.82	0.07	0.11
6	0.85	0.07	0.08	0.88	0.07	0.05	--	--	--
7	0.84	0.08	0.08	0.88	0.06	0.06	--	--	--
8	0.83	0.07	0.10	0.83	0.08	0.09	0.86	0.06	0.08

*Pos. = Positives. Neg. = Negatives.

5. Proficiency Projection

Proficiency projection tells how likely a student is classified as “proficient” on STAAR tests based on his or her observed MAP Growth scores. The conditional growth norms provided in the 2015 MAP Growth norms report were used to calculate this information (Thum & Hauser, 2015). The results of proficiency projection and corresponding probability of achieving “proficient” on the STAAR tests are presented in Table 5.1 – Table 5.4. These tables estimate the probability of scoring at Level 3 or above on STAAR in the spring and the prior fall or winter testing season. For example, if a grade 3 student obtained a MAP Growth Mathematics score of 201 in the fall, the probability of obtaining a Level 3 or higher STAAR score in the spring of grade 3 is 78%. Table 5.1 presents the estimated probability of meeting Level 3 benchmark when MAP Growth is taken in the spring, whereas Table 5.2 – Table 5.4 present the estimated probability of meeting Level 3 benchmark when MAP Growth is taken in the fall or winter prior to taking the STAAR tests.

Table 5.1. Proficiency Projection and Probability for Passing STAAR Level 3 when MAP Growth is taken in the Spring

Grade	Start Percentile	Reading				Mathematics				Science			
		RIT (Spring)	Projected Proficiency			RIT (Spring)	Projected Proficiency			RIT (Spring)	Projected Proficiency		
			Cut Score	Level 3	Prob.		Cut Score	Level 3	Prob.		Cut Score	Level 3	Prob.
2	5	164	194	No	<0.01	170	196	No	<0.01	--	--	--	--
	10	169	194	No	<0.01	175	196	No	<0.01	--	--	--	--
	15	173	194	No	<0.01	178	196	No	<0.01	--	--	--	--
	20	176	194	No	<0.01	181	196	No	<0.01	--	--	--	--
	25	178	194	No	<0.01	183	196	No	<0.01	--	--	--	--
	30	181	194	No	<0.01	185	196	No	<0.01	--	--	--	--
	35	183	194	No	<0.01	187	196	No	<0.01	--	--	--	--
	40	185	194	No	<0.01	189	196	No	0.01	--	--	--	--
	45	187	194	No	0.01	190	196	No	0.02	--	--	--	--
	50	189	194	No	0.06	192	196	No	0.08	--	--	--	--
	55	191	194	No	0.17	194	196	No	0.25	--	--	--	--
	60	193	194	No	0.38	196	196	Yes	0.50	--	--	--	--
	65	195	194	Yes	0.62	197	196	Yes	0.63	--	--	--	--
	70	197	194	Yes	0.83	199	196	Yes	0.85	--	--	--	--
	75	199	194	Yes	0.94	201	196	Yes	0.96	--	--	--	--
	80	201	194	Yes	0.99	204	196	Yes	>0.99	--	--	--	--
	85	204	194	Yes	>0.99	206	196	Yes	>0.99	--	--	--	--
90	208	194	Yes	>0.99	209	196	Yes	>0.99	--	--	--	--	
95	214	194	Yes	>0.99	214	196	Yes	>0.99	--	--	--	--	

Grade	Start Percentile	Reading				Mathematics				Science			
		RIT (Spring)	Projected Proficiency			RIT (Spring)	Projected Proficiency			RIT (Spring)	Projected Proficiency		
			Cut Score	Level 3	Prob.		Cut Score	Level 3	Prob.		Cut Score	Level 3	Prob.
3	5	174	204	No	<0.01	181	208	No	<0.01	--	--	--	--
	10	179	204	No	<0.01	186	208	No	<0.01	--	--	--	--
	15	183	204	No	<0.01	189	208	No	<0.01	--	--	--	--
	20	186	204	No	<0.01	192	208	No	<0.01	--	--	--	--
	25	188	204	No	<0.01	194	208	No	<0.01	--	--	--	--
	30	191	204	No	<0.01	196	208	No	<0.01	--	--	--	--
	35	193	204	No	<0.01	198	208	No	<0.01	--	--	--	--
	40	195	204	No	<0.01	200	208	No	<0.01	--	--	--	--
	45	197	204	No	0.01	202	208	No	0.02	--	--	--	--
	50	199	204	No	0.06	203	208	No	0.04	--	--	--	--
	55	201	204	No	0.17	205	208	No	0.15	--	--	--	--
	60	202	204	No	0.27	207	208	No	0.37	--	--	--	--
	65	204	204	Yes	0.50	209	208	Yes	0.63	--	--	--	--
	70	207	204	Yes	0.83	211	208	Yes	0.85	--	--	--	--
	75	209	204	Yes	0.94	213	208	Yes	0.96	--	--	--	--
	80	211	204	Yes	0.99	215	208	Yes	0.99	--	--	--	--
	85	214	204	Yes	>0.99	218	208	Yes	>0.99	--	--	--	--
90	218	204	Yes	>0.99	221	208	Yes	>0.99	--	--	--	--	
95	223	204	Yes	>0.99	226	208	Yes	>0.99	--	--	--	--	
4	5	181	212	No	<0.01	189	220	No	<0.01	--	--	--	--
	10	187	212	No	<0.01	194	220	No	<0.01	--	--	--	--
	15	190	212	No	<0.01	198	220	No	<0.01	--	--	--	--
	20	193	212	No	<0.01	201	220	No	<0.01	--	--	--	--
	25	196	212	No	<0.01	203	220	No	<0.01	--	--	--	--
	30	198	212	No	<0.01	206	220	No	<0.01	--	--	--	--
	35	200	212	No	<0.01	208	220	No	<0.01	--	--	--	--
	40	202	212	No	<0.01	210	220	No	<0.01	--	--	--	--
	45	204	212	No	0.01	212	220	No	<0.01	--	--	--	--
	50	206	212	No	0.03	213	220	No	0.01	--	--	--	--
	55	208	212	No	0.11	215	220	No	0.04	--	--	--	--
	60	210	212	No	0.27	217	220	No	0.15	--	--	--	--
	65	212	212	Yes	0.50	219	220	No	0.37	--	--	--	--
	70	214	212	Yes	0.73	221	220	Yes	0.63	--	--	--	--
	75	216	212	Yes	0.89	224	220	Yes	0.92	--	--	--	--
	80	218	212	Yes	0.97	226	220	Yes	0.98	--	--	--	--
	85	221	212	Yes	>0.99	229	220	Yes	>0.99	--	--	--	--
90	225	212	Yes	>0.99	233	220	Yes	>0.99	--	--	--	--	
95	230	212	Yes	>0.99	238	220	Yes	>0.99	--	--	--	--	

Grade	Start Percentile	Reading				Mathematics				Science			
		RIT (Spring)	Projected Proficiency			RIT (Spring)	Projected Proficiency			RIT (Spring)	Projected Proficiency		
			Cut Score	Level 3	Prob.		Cut Score	Level 3	Prob.		Cut Score	Level 3	Prob.
5	5	188	217	No	<0.01	195	225	No	<0.01	188	217	No	<0.01
	10	193	217	No	<0.01	201	225	No	<0.01	192	217	No	<0.01
	15	197	217	No	<0.01	205	225	No	<0.01	194	217	No	<0.01
	20	199	217	No	<0.01	208	225	No	<0.01	196	217	No	<0.01
	25	202	217	No	<0.01	210	225	No	<0.01	198	217	No	<0.01
	30	204	217	No	<0.01	213	225	No	<0.01	200	217	No	<0.01
	35	206	217	No	<0.01	215	225	No	<0.01	201	217	No	<0.01
	40	208	217	No	<0.01	217	225	No	<0.01	203	217	No	<0.01
	45	210	217	No	0.01	219	225	No	0.02	204	217	No	<0.01
	50	212	217	No	0.06	221	225	No	0.08	206	217	No	<0.01
	55	214	217	No	0.17	223	225	No	0.25	207	217	No	<0.01
	60	216	217	No	0.38	225	225	Yes	0.50	209	217	No	0.01
	65	217	217	Yes	0.50	228	225	Yes	0.85	210	217	No	0.02
	70	220	217	Yes	0.83	230	225	Yes	0.96	212	217	No	0.07
	75	222	217	Yes	0.94	232	225	Yes	0.99	213	217	No	0.12
	80	224	217	Yes	0.99	235	225	Yes	>0.99	215	217	No	0.28
	85	227	217	Yes	>0.99	238	225	Yes	>0.99	217	217	Yes	0.50
90	231	217	Yes	>0.99	242	225	Yes	>0.99	220	217	Yes	0.81	
95	236	217	Yes	>0.99	248	225	Yes	>0.99	224	217	Yes	0.98	
6	5	192	222	No	<0.01	198	229	No	<0.01	--	--	--	--
	10	197	222	No	<0.01	204	229	No	<0.01	--	--	--	--
	15	201	222	No	<0.01	208	229	No	<0.01	--	--	--	--
	20	203	222	No	<0.01	211	229	No	<0.01	--	--	--	--
	25	206	222	No	<0.01	214	229	No	<0.01	--	--	--	--
	30	208	222	No	<0.01	217	229	No	<0.01	--	--	--	--
	35	210	222	No	<0.01	219	229	No	<0.01	--	--	--	--
	40	212	222	No	<0.01	221	229	No	<0.01	--	--	--	--
	45	214	222	No	0.01	223	229	No	0.02	--	--	--	--
	50	216	222	No	0.03	225	229	No	0.08	--	--	--	--
	55	218	222	No	0.11	227	229	No	0.25	--	--	--	--
	60	219	222	No	0.17	230	229	Yes	0.63	--	--	--	--
	65	221	222	No	0.38	232	229	Yes	0.85	--	--	--	--
	70	223	222	Yes	0.62	234	229	Yes	0.96	--	--	--	--
	75	226	222	Yes	0.89	237	229	Yes	>0.99	--	--	--	--
	80	228	222	Yes	0.97	239	229	Yes	>0.99	--	--	--	--
	85	231	222	Yes	>0.99	243	229	Yes	>0.99	--	--	--	--
90	235	222	Yes	>0.99	247	229	Yes	>0.99	--	--	--	--	
95	240	222	Yes	>0.99	253	229	Yes	>0.99	--	--	--	--	

Grade	Start Percentile	Reading				Mathematics				Science			
		RIT (Spring)	Projected Proficiency			RIT (Spring)	Projected Proficiency			RIT (Spring)	Projected Proficiency		
			Cut Score	Level 3	Prob.		Cut Score	Level 3	Prob.		Cut Score	Level 3	Prob.
7	5	193	223	No	<0.01	199	234	No	<0.01	--	--	--	--
	10	199	223	No	<0.01	206	234	No	<0.01	--	--	--	--
	15	202	223	No	<0.01	210	234	No	<0.01	--	--	--	--
	20	205	223	No	<0.01	214	234	No	<0.01	--	--	--	--
	25	208	223	No	<0.01	217	234	No	<0.01	--	--	--	--
	30	210	223	No	<0.01	219	234	No	<0.01	--	--	--	--
	35	212	223	No	<0.01	222	234	No	<0.01	--	--	--	--
	40	214	223	No	<0.01	224	234	No	<0.01	--	--	--	--
	45	216	223	No	0.01	226	234	No	<0.01	--	--	--	--
	50	218	223	No	0.06	229	234	No	0.04	--	--	--	--
	55	220	223	No	0.17	231	234	No	0.15	--	--	--	--
	60	222	223	No	0.38	233	234	No	0.37	--	--	--	--
	65	224	223	Yes	0.62	235	234	Yes	0.63	--	--	--	--
	70	226	223	Yes	0.83	238	234	Yes	0.92	--	--	--	--
	75	228	223	Yes	0.94	241	234	Yes	0.99	--	--	--	--
	80	231	223	Yes	0.99	244	234	Yes	>0.99	--	--	--	--
	85	234	223	Yes	>0.99	247	234	Yes	>0.99	--	--	--	--
90	238	223	Yes	>0.99	251	234	Yes	>0.99	--	--	--	--	
95	243	223	Yes	>0.99	258	234	Yes	>0.99	--	--	--	--	
8	5	194	224	No	<0.01	199	234	No	<0.01	193	221	No	<0.01
	10	200	224	No	<0.01	206	234	No	<0.01	197	221	No	<0.01
	15	204	224	No	<0.01	211	234	No	<0.01	200	221	No	<0.01
	20	207	224	No	<0.01	215	234	No	<0.01	203	221	No	<0.01
	25	209	224	No	<0.01	218	234	No	<0.01	205	221	No	<0.01
	30	212	224	No	<0.01	221	234	No	<0.01	207	221	No	<0.01
	35	214	224	No	<0.01	224	234	No	<0.01	209	221	No	<0.01
	40	216	224	No	0.01	226	234	No	<0.01	210	221	No	<0.01
	45	218	224	No	0.03	229	234	No	0.04	212	221	No	<0.01
	50	220	224	No	0.11	231	234	No	0.15	214	221	No	0.02
	55	222	224	No	0.27	233	234	No	0.37	215	221	No	0.04
	60	224	224	Yes	0.50	236	234	Yes	0.75	217	221	No	0.12
	65	226	224	Yes	0.73	238	234	Yes	0.92	218	221	No	0.19
	70	228	224	Yes	0.89	241	234	Yes	0.99	220	221	No	0.38
	75	231	224	Yes	0.99	244	234	Yes	>0.99	222	221	Yes	0.62
	80	233	224	Yes	>0.99	247	234	Yes	>0.99	224	221	Yes	0.81
	85	236	224	Yes	>0.99	251	234	Yes	>0.99	227	221	Yes	0.96
90	240	224	Yes	>0.99	255	234	Yes	>0.99	230	221	Yes	>0.99	
95	246	224	Yes	>0.99	262	234	Yes	>0.99	234	221	Yes	>0.99	

Table 5.2. Proficiency Projection and Probability for Passing STAAR Level 3 when MAP Growth is taken in the Fall or Winter—Reading

Grade	Start Percentile	Reading (Fall)				Reading (Winter)			
		RIT (Fall)	Projected Proficiency			RIT (Winter)	Projected Proficiency		
			Cut Score	Level 3	Prob.		Cut Score	Level 3	Prob.
2	5	149	194	No	<0.01	160	194	No	<0.01
	10	155	194	No	<0.01	165	194	No	<0.01
	15	159	194	No	0.01	169	194	No	<0.01
	20	162	194	No	0.02	172	194	No	<0.01
	25	164	194	No	0.04	174	194	No	<0.01
	30	167	194	No	0.06	176	194	No	0.01
	35	169	194	No	0.10	178	194	No	0.02
	40	171	194	No	0.15	180	194	No	0.05
	45	173	194	No	0.19	182	194	No	0.10
	50	175	194	No	0.26	184	194	No	0.18
	55	177	194	No	0.35	186	194	No	0.23
	60	179	194	No	0.40	188	194	No	0.36
	65	181	194	Yes	0.50	190	194	Yes	0.50
	70	183	194	Yes	0.60	192	194	Yes	0.64
	75	185	194	Yes	0.65	194	194	Yes	0.77
	80	188	194	Yes	0.78	197	194	Yes	0.90
	85	191	194	Yes	0.85	200	194	Yes	0.97
90	195	194	Yes	0.94	203	194	Yes	0.99	
95	200	194	Yes	0.98	209	194	Yes	>0.99	
3	5	162	204	No	<0.01	171	204	No	<0.01
	10	168	204	No	<0.01	176	204	No	<0.01
	15	172	204	No	<0.01	180	204	No	<0.01
	20	175	204	No	0.01	183	204	No	<0.01
	25	178	204	No	0.03	185	204	No	<0.01
	30	180	204	No	0.05	188	204	No	0.01
	35	182	204	No	0.06	190	204	No	0.02
	40	184	204	No	0.10	192	204	No	0.04
	45	186	204	No	0.16	194	204	No	0.09
	50	188	204	No	0.20	196	204	No	0.17
	55	190	204	No	0.29	198	204	No	0.28
	60	192	204	No	0.39	199	204	No	0.35
	65	194	204	No	0.44	201	204	Yes	0.50
	70	197	204	Yes	0.61	204	204	Yes	0.72
	75	199	204	Yes	0.71	206	204	Yes	0.78
	80	202	204	Yes	0.80	208	204	Yes	0.87
	85	205	204	Yes	0.90	211	204	Yes	0.96
90	209	204	Yes	0.95	215	204	Yes	0.99	
95	214	204	Yes	0.99	221	204	Yes	>0.99	

Grade	Start Percentile	Reading (Fall)				Reading (Winter)			
		RIT (Fall)	Projected Proficiency			RIT (Winter)	Projected Proficiency		
			Cut Score	Level 3	Prob.		Cut Score	Level 3	Prob.
4	5	173	212	No	<0.01	179	212	No	<0.01
	10	178	212	No	<0.01	184	212	No	<0.01
	15	182	212	No	<0.01	188	212	No	<0.01
	20	185	212	No	0.01	191	212	No	<0.01
	25	188	212	No	0.01	194	212	No	<0.01
	30	190	212	No	0.03	196	212	No	0.01
	35	192	212	No	0.05	198	212	No	0.02
	40	194	212	No	0.07	200	212	No	0.04
	45	196	212	No	0.12	202	212	No	0.06
	50	198	212	No	0.18	204	212	No	0.12
	55	200	212	No	0.23	205	212	No	0.16
	60	202	212	No	0.33	207	212	No	0.28
	65	204	212	No	0.44	209	212	No	0.42
	70	206	212	Yes	0.56	211	212	Yes	0.58
	75	209	212	Yes	0.67	214	212	Yes	0.78
	80	211	212	Yes	0.77	216	212	Yes	0.88
	85	214	212	Yes	0.85	219	212	Yes	0.94
90	218	212	Yes	0.95	223	212	Yes	0.99	
95	224	212	Yes	0.99	228	212	Yes	>0.99	
5	5	181	217	No	<0.01	186	217	No	<0.01
	10	186	217	No	<0.01	191	217	No	<0.01
	15	190	217	No	<0.01	195	217	No	<0.01
	20	193	217	No	0.01	197	217	No	<0.01
	25	195	217	No	0.02	200	217	No	<0.01
	30	198	217	No	0.04	202	217	No	0.01
	35	200	217	No	0.07	204	217	No	0.02
	40	202	217	No	0.12	206	217	No	0.04
	45	204	217	No	0.15	208	217	No	0.09
	50	206	217	No	0.23	210	217	No	0.17
	55	208	217	No	0.33	212	217	No	0.28
	60	210	217	No	0.44	214	217	No	0.42
	65	212	217	Yes	0.50	215	217	Yes	0.50
	70	214	217	Yes	0.62	218	217	Yes	0.72
	75	216	217	Yes	0.72	220	217	Yes	0.78
	80	218	217	Yes	0.77	222	217	Yes	0.88
	85	221	217	Yes	0.88	225	217	Yes	0.96
90	225	217	Yes	0.95	229	217	Yes	0.99	
95	231	217	Yes	0.99	234	217	Yes	>0.99	

Grade	Start Percentile	Reading (Fall)				Reading (Winter)			
		RIT (Fall)	Projected Proficiency			RIT (Winter)	Projected Proficiency		
			Cut Score	Level 3	Prob.		Cut Score	Level 3	Prob.
6	5	186	222	No	<0.01	190	222	No	<0.01
	10	192	222	No	<0.01	196	222	No	<0.01
	15	196	222	No	<0.01	199	222	No	<0.01
	20	198	222	No	<0.01	202	222	No	<0.01
	25	201	222	No	0.01	204	222	No	<0.01
	30	203	222	No	0.03	207	222	No	0.01
	35	205	222	No	0.06	209	222	No	0.02
	40	207	222	No	0.07	211	222	No	0.04
	45	209	222	No	0.12	212	222	No	0.06
	50	211	222	No	0.19	214	222	No	0.12
	55	213	222	No	0.28	216	222	No	0.17
	60	215	222	No	0.33	218	222	No	0.28
	65	217	222	No	0.44	220	222	No	0.42
	70	219	222	Yes	0.56	222	222	Yes	0.58
	75	221	222	Yes	0.61	224	222	Yes	0.72
	80	224	222	Yes	0.77	226	222	Yes	0.83
	85	226	222	Yes	0.84	229	222	Yes	0.94
90	230	222	Yes	0.93	233	222	Yes	0.99	
95	236	222	Yes	0.99	238	222	Yes	>0.99	
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	

Grade	Start Percentile	Reading (Fall)				Reading (Winter)			
		RIT (Fall)	Projected Proficiency			RIT (Winter)	Projected Proficiency		
			Cut Score	Level 3	Prob.		Cut Score	Level 3	Prob.
8	5	191	224	No	<0.01	194	224	No	<0.01
	10	197	224	No	<0.01	199	224	No	<0.01
	15	201	224	No	0.01	203	224	No	<0.01
	20	204	224	No	0.03	206	224	No	<0.01
	25	207	224	No	0.05	209	224	No	0.01
	30	209	224	No	0.08	211	224	No	0.01
	35	211	224	No	0.13	213	224	No	0.03
	40	213	224	No	0.16	215	224	No	0.07
	45	215	224	No	0.22	217	224	No	0.14
	50	217	224	No	0.31	219	224	No	0.23
	55	219	224	No	0.40	221	224	No	0.36
	60	221	224	No	0.45	223	224	Yes	0.50
	65	223	224	Yes	0.55	225	224	Yes	0.64
	70	225	224	Yes	0.65	227	224	Yes	0.77
	75	228	224	Yes	0.74	229	224	Yes	0.86
	80	230	224	Yes	0.81	232	224	Yes	0.93
	85	234	224	Yes	0.92	235	224	Yes	0.98
90	237	224	Yes	0.95	239	224	Yes	>0.99	
95	243	224	Yes	0.99	244	224	Yes	>0.99	

Table 5.3. Proficiency Projection and Probability for Passing STAAR Level 3 when MAP Growth is taken in the Fall or Winter—Mathematics

Grade	Start Percentile	Mathematics (Fall)				Mathematics (Winter)			
		RIT (Fall)	Projected Proficiency			RIT (Winter)	Projected Proficiency		
			Cut Score	Level 3	Prob.		Cut Score	Level 3	Prob.
2	5	155	196	No	<0.01	165	196	No	<0.01
	10	160	196	No	<0.01	170	196	No	<0.01
	15	163	196	No	0.01	173	196	No	<0.01
	20	166	196	No	0.03	175	196	No	<0.01
	25	168	196	No	0.04	178	196	No	0.01
	30	170	196	No	0.07	180	196	No	0.02
	35	172	196	No	0.12	181	196	No	0.03
	40	174	196	No	0.19	183	196	No	0.08
	45	175	196	No	0.19	185	196	No	0.15
	50	177	196	No	0.28	186	196	No	0.21
	55	179	196	No	0.39	188	196	No	0.34
	60	180	196	No	0.44	190	196	Yes	0.50
	65	182	196	Yes	0.56	191	196	Yes	0.58
	70	184	196	Yes	0.61	193	196	Yes	0.66
	75	186	196	Yes	0.72	195	196	Yes	0.79
	80	188	196	Yes	0.81	197	196	Yes	0.89
	85	191	196	Yes	0.90	200	196	Yes	0.97
90	194	196	Yes	0.94	203	196	Yes	0.99	
95	199	196	Yes	0.99	208	196	Yes	>0.99	

Grade	Start Percentile	Mathematics (Fall)				Mathematics (Winter)			
		RIT (Fall)	Projected Proficiency			RIT (Winter)	Projected Proficiency		
			Cut Score	Level 3	Prob.		Cut Score	Level 3	Prob.
3	5	169	208	No	<0.01	176	208	No	<0.01
	10	174	208	No	<0.01	181	208	No	<0.01
	15	177	208	No	<0.01	184	208	No	<0.01
	20	179	208	No	0.01	187	208	No	<0.01
	25	182	208	No	0.03	189	208	No	<0.01
	30	184	208	No	0.04	191	208	No	0.01
	35	185	208	No	0.06	193	208	No	0.02
	40	187	208	No	0.11	195	208	No	0.05
	45	189	208	No	0.17	197	208	No	0.10
	50	190	208	No	0.22	198	208	No	0.14
	55	192	208	No	0.32	200	208	No	0.26
	60	194	208	No	0.44	202	208	No	0.42
	65	195	208	Yes	0.50	203	208	Yes	0.50
	70	197	208	Yes	0.62	205	208	Yes	0.66
	75	199	208	Yes	0.68	207	208	Yes	0.80
	80	201	208	Yes	0.78	209	208	Yes	0.90
	85	204	208	Yes	0.89	212	208	Yes	0.97
90	207	208	Yes	0.96	215	208	Yes	0.99	
95	212	208	Yes	0.99	220	208	Yes	>0.99	
4	5	179	220	No	<0.01	185	220	No	<0.01
	10	184	220	No	<0.01	190	220	No	<0.01
	15	188	220	No	<0.01	194	220	No	<0.01
	20	190	220	No	<0.01	197	220	No	<0.01
	25	193	220	No	0.01	199	220	No	<0.01
	30	195	220	No	0.02	201	220	No	<0.01
	35	197	220	No	0.04	203	220	No	0.01
	40	198	220	No	0.06	205	220	No	0.02
	45	200	220	No	0.11	207	220	No	0.05
	50	202	220	No	0.17	209	220	No	0.10
	55	204	220	No	0.27	211	220	No	0.20
	60	205	220	No	0.27	212	220	No	0.26
	65	207	220	No	0.38	214	220	No	0.42
	70	209	220	Yes	0.50	216	220	Yes	0.58
	75	211	220	Yes	0.62	218	220	Yes	0.74
	80	214	220	Yes	0.78	221	220	Yes	0.90
	85	216	220	Yes	0.86	223	220	Yes	0.95
90	220	220	Yes	0.96	227	220	Yes	0.99	
95	225	220	Yes	0.99	232	220	Yes	>0.99	

Grade	Start Percentile	Mathematics (Fall)				Mathematics (Winter)			
		RIT (Fall)	Projected Proficiency			RIT (Winter)	Projected Proficiency		
			Cut Score	Level 3	Prob.		Cut Score	Level 3	Prob.
5	5	187	225	No	<0.01	192	225	No	<0.01
	10	193	225	No	<0.01	198	225	No	<0.01
	15	196	225	No	<0.01	201	225	No	<0.01
	20	199	225	No	0.01	204	225	No	<0.01
	25	202	225	No	0.03	207	225	No	<0.01
	30	204	225	No	0.05	209	225	No	0.01
	35	206	225	No	0.09	211	225	No	0.02
	40	208	225	No	0.15	213	225	No	0.05
	45	210	225	No	0.23	215	225	No	0.11
	50	211	225	No	0.28	217	225	No	0.20
	55	213	225	No	0.38	219	225	No	0.34
	60	215	225	Yes	0.50	221	225	Yes	0.50
	65	217	225	Yes	0.62	223	225	Yes	0.66
	70	219	225	Yes	0.72	225	225	Yes	0.80
	75	221	225	Yes	0.81	228	225	Yes	0.93
	80	224	225	Yes	0.91	230	225	Yes	0.97
	85	227	225	Yes	0.96	233	225	Yes	0.99
90	230	225	Yes	0.99	237	225	Yes	>0.99	
95	236	225	Yes	>0.99	242	225	Yes	>0.99	
6	5	192	229	No	<0.01	196	229	No	<0.01
	10	198	229	No	<0.01	202	229	No	<0.01
	15	202	229	No	<0.01	205	229	No	<0.01
	20	205	229	No	0.01	209	229	No	<0.01
	25	207	229	No	0.02	211	229	No	<0.01
	30	209	229	No	0.04	214	229	No	0.01
	35	212	229	No	0.09	216	229	No	0.02
	40	214	229	No	0.15	218	229	No	0.05
	45	216	229	No	0.23	220	229	No	0.11
	50	218	229	No	0.33	222	229	No	0.20
	55	220	229	No	0.44	224	229	No	0.34
	60	222	229	Yes	0.56	226	229	Yes	0.50
	65	224	229	Yes	0.67	228	229	Yes	0.66
	70	226	229	Yes	0.77	230	229	Yes	0.80
	75	228	229	Yes	0.85	233	229	Yes	0.93
	80	231	229	Yes	0.93	236	229	Yes	0.98
	85	234	229	Yes	0.96	239	229	Yes	>0.99
90	238	229	Yes	0.99	243	229	Yes	>0.99	
95	243	229	Yes	>0.99	248	229	Yes	>0.99	

Grade	Start Percentile	Mathematics (Fall)				Mathematics (Winter)			
		RIT (Fall)	Projected Proficiency			RIT (Winter)	Projected Proficiency		
			Cut Score	Level 3	Prob.		Cut Score	Level 3	Prob.
7	5	195	234	No	<0.01	198	234	No	<0.01
	10	201	234	No	<0.01	204	234	No	<0.01
	15	205	234	No	<0.01	208	234	No	<0.01
	20	209	234	No	<0.01	212	234	No	<0.01
	25	211	234	No	<0.01	215	234	No	<0.01
	30	214	234	No	0.02	217	234	No	<0.01
	35	216	234	No	0.03	220	234	No	0.01
	40	218	234	No	0.06	222	234	No	0.02
	45	221	234	No	0.14	224	234	No	0.05
	50	223	234	No	0.22	226	234	No	0.10
	55	225	234	No	0.32	228	234	No	0.20
	60	227	234	No	0.44	230	234	No	0.34
	65	229	234	Yes	0.56	233	234	Yes	0.58
	70	231	234	Yes	0.68	235	234	Yes	0.74
	75	234	234	Yes	0.82	238	234	Yes	0.90
	80	237	234	Yes	0.92	240	234	Yes	0.95
	85	240	234	Yes	0.97	244	234	Yes	0.99
90	244	234	Yes	0.99	248	234	Yes	>0.99	
95	250	234	Yes	>0.99	254	234	Yes	>0.99	
8	5	197	234	No	<0.01	199	234	No	<0.01
	10	203	234	No	<0.01	206	234	No	<0.01
	15	208	234	No	<0.01	210	234	No	<0.01
	20	211	234	No	0.01	214	234	No	<0.01
	25	214	234	No	0.02	217	234	No	<0.01
	30	217	234	No	0.06	220	234	No	0.01
	35	219	234	No	0.10	222	234	No	0.02
	40	222	234	No	0.18	225	234	No	0.08
	45	224	234	No	0.26	227	234	No	0.16
	50	226	234	No	0.35	229	234	No	0.28
	55	229	234	Yes	0.50	231	234	No	0.42
	60	231	234	Yes	0.60	234	234	Yes	0.65
	65	233	234	Yes	0.70	236	234	Yes	0.79
	70	236	234	Yes	0.78	239	234	Yes	0.92
	75	238	234	Yes	0.85	241	234	Yes	0.96
	80	241	234	Yes	0.92	245	234	Yes	>0.99
	85	245	234	Yes	0.98	248	234	Yes	>0.99
90	249	234	Yes	0.99	253	234	Yes	>0.99	
95	256	234	Yes	>0.99	259	234	Yes	>0.99	

Table 5.4. Proficiency Projection and Probability for Passing STAAR Level 3 when MAP Growth is taken in the Fall or Winter—Science

Grade	Start Percentile	Science (Fall)				Science (Winter)			
		RIT (Fall)	Projected Proficiency			RIT (Winter)	Projected Proficiency		
			Cut Score	Level 3	Prob.		Cut Score	Level 3	Prob.
5	5	182	217	No	<0.01	186	217	No	<0.01
	10	186	217	No	<0.01	190	217	No	<0.01
	15	189	217	No	<0.01	192	217	No	<0.01
	20	191	217	No	<0.01	195	217	No	<0.01
	25	193	217	No	0.01	196	217	No	<0.01
	30	194	217	No	0.01	198	217	No	<0.01
	35	196	217	No	0.01	200	217	No	<0.01
	40	197	217	No	0.02	201	217	No	0.01
	45	199	217	No	0.04	202	217	No	0.01
	50	200	217	No	0.05	204	217	No	0.02
	55	202	217	No	0.07	205	217	No	0.03
	60	203	217	No	0.09	206	217	No	0.05
	65	204	217	No	0.12	208	217	No	0.10
	70	206	217	No	0.15	209	217	No	0.10
	75	208	217	No	0.23	211	217	No	0.18
	80	210	217	No	0.28	213	217	No	0.29
	85	212	217	No	0.38	215	217	No	0.43
90	214	217	Yes	0.50	218	217	Yes	0.57	
95	218	217	Yes	0.67	221	217	Yes	0.77	
8	5	190	221	No	<0.01	192	221	No	<0.01
	10	195	221	No	<0.01	197	221	No	<0.01
	15	198	221	No	0.01	200	221	No	<0.01
	20	200	221	No	0.01	202	221	No	<0.01
	25	202	221	No	0.03	204	221	No	<0.01
	30	204	221	No	0.04	206	221	No	0.01
	35	206	221	No	0.07	208	221	No	0.03
	40	207	221	No	0.09	209	221	No	0.03
	45	209	221	No	0.11	211	221	No	0.06
	50	210	221	No	0.14	212	221	No	0.08
	55	212	221	No	0.21	214	221	No	0.14
	60	213	221	No	0.25	215	221	No	0.19
	65	215	221	No	0.29	217	221	No	0.30
	70	217	221	No	0.39	219	221	No	0.43
	75	219	221	Yes	0.50	221	221	Yes	0.57
	80	221	221	Yes	0.61	223	221	Yes	0.64
	85	223	221	Yes	0.66	225	221	Yes	0.76
90	226	221	Yes	0.79	228	221	Yes	0.89	
95	230	221	Yes	0.89	232	221	Yes	0.97	

6. Summary and Discussion

This study produced a set of cut scores on MAP Growth Reading and Mathematics for grades 2–8 and Science for grades 5 and 8 that correspond to each STAAR performance level. By using matched score data from a sample of students from Texas, the study demonstrates that MAP Growth scores can accurately predict whether a student would reach proficiency on STAAR based on his or her MAP Growth scores. This study also used the 2015 NWEA norming study results to project a student's probability to meet proficiency based on that student's prior MAP Growth scores in fall and winter.

However, while concordance tables can be helpful and informative, they have some limitations:

1. The concordance tables provide information about score comparability on different tests, but the scores cannot be assumed to be interchangeable. In the case for STAAR and MAP Growth tests, as they are not parallel in content, scores from these two tests should not be directly compared.
2. The sample data used in this study were collected from 351 schools in Texas. Caution should be exercised when generalizing the results to students who differ significantly from this sample.
3. Caution should be exercised if the concorded scores are used for a subpopulation. NWEA will continue to gather information about STAAR performance from other schools in Texas to enhance the quality and generalizability of the study.

Regardless of these limitations, the results of this study will help educators predict student performance in STAAR tests as early as possible and identify students at risk of failing to meet required standards so they can receive necessary resources and assistance to meet their goals.

7. References

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