

WASHINGTON LINKING STUDY

A Study of the Alignment of the NWEA RIT Scale
with Washington's Measurement of Student Progress (MSP) and
High School Proficiency Exam (HSPE)

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A STUDY OF THE ALIGNMENT OF THE NWEA RIT SCALE WITH THE WASHINGTON'S MEASUREMENT OF STUDENT PROGRESS (MSP) AND HIGH SCHOOL PROFICIENCY EXAM (HSPE)

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Recently, NWEA completed a project to connect the scale of Washington's Measurement of Student Progress (MSP) and High School Proficiency Exam (HSPE) used for Washington's mathematics, reading, and science assessments with NWEA's RIT scale. Information from the state assessments was used in a study to establish performance-level scores on the RIT scale that would indicate a good chance of success on these tests.

To perform the analysis, we linked together state test and NWEA test results for a sample of 57,735 Washington students from 271 schools who completed both exams in the spring of 2010. The Washington state test is administered in the Spring. For the spring season (labeled "current season"), an Equipercentile method was used to estimate the RIT score equivalent to each state performance level. For fall (labeled "prior season"), we determined the percentage of the population within the selected study group that performed at each level on the state test and found the equivalent percentile ranges within the NWEA dataset to estimate the cut scores. For example, if 40% of the study group population in grade 3 mathematics performed below the proficient level on the state test, we would find the RIT score that would be equivalent to the 40th percentile for the study population (this would not be the same as the 40th percentile in the NWEA norms). This RIT score would be the estimated point on the NWEA RIT scale that would be equivalent to the minimum score for proficiency on the state test. Documentation about this method can be found on our website.

Tables 1 through 6 show the best estimate of the minimum RIT equivalent to each state performance level for same-season (spring) and prior-season (fall) RIT scores. These tables can be used to identify students who may need additional help to perform well on these tests.

Tables 7 through 12 show the estimated probability of a student receiving a proficient score on the state assessment, based on that student's RIT score. These tables can be used to assist in identifying students who are not likely to pass these assessments and also for identifying target RIT-score objectives likely to correspond to a student's successful level of performance on the state test.

Table 9 shows the correlation coefficients between MAP and the state test for reading and mathematics in each grade. These statistics show the degree to which MAP and the state test are linearly related, with values at or near 1.0 suggesting a perfect linear relationship, and values near 0.0 indicating no linear relationship. Table 10 shows the percentages of students at each grade and within each subject whose status on the state test (i.e., whether or not the student "met standards") was accurately predicted by their MAP performance and using the estimated cut scores within the current study. This table can be used to understand the predictive validity of MAP with respect to the MSP/HSPE.

TABLE 1 – MINIMUM ESTIMATED SAME-SEASON (SPRING) RIT CUT SCORES
CORRESPONDING TO STATE PERFORMANCE LEVELS – MATHEMATICS

MATH-Current Season							
Cut Scores and Percentiles for each State Performance Level							
Grade	Well Below	Below		Met		Exceeds	
	Cut Score	Cut Score	Perce- tile	Cut Score	Perce- tile	Cut Score	Perce- tile
2	<181	181	20	189	45	201	80
3	<192	192	20	201	45	212	80
4	<204	204	29	212	52	225	84
5	<211	211	30	222	56	234	84
6	<217	217	32	228	58	242	89
7	<221	221	32	231	54	245	84
8	<227	227	35	237	57	252	88
10	<236	236	44	249	73	261	92

* Note: the cut scores shown in this table are the **minimum** estimated scores. Meeting the minimum MAP cut score corresponds to a 50% probability of achieving that performance level. Use the probabilities in Tables 5-8 to determine the appropriate 'target' scores for a desired level of certainty. Italics represent extrapolated data.

TABLE 2 – MINIMUM ESTIMATED SAME-SEASON (SPRING) RIT CUT SCORES
CORRESPONDING TO STATE PERFORMANCE LEVELS – READING

READING-Current Season							
Cut Scores and Percentiles for each State Performance Level							
Grade	Well Below	Below		Met		Exceeds	
	Cut Score	Cut Score	Perce- tile	Cut Score	Perce- tile	Cut Score	Perce- tile
2	<171	171	9	183	31	197	69
3	<180	180	9	193	31	206	69
4	<185	185	8	203	39	216	78
5	<195	195	12	208	37	217	66
6	<200	200	14	214	44	228	84
7	<204	204	15	218	47	227	73
8	<208	208	16	219	40	228	66
10	<204	204	9	217	26	230	58

* Note: the cut scores shown in this table are the **minimum** estimated scores. Meeting the minimum MAP cut score corresponds to a 50% probability of achieving that performance level. Use the probabilities in Tables 7-12 to determine the appropriate 'target' scores for a desired level of certainty. Italics represent extrapolated data.

TABLE 3 – MINIMUM ESTIMATED PRIOR-SEASON (FALL) RIT CUT SCORES CORRESPONDING TO STATE PERFORMANCE LEVELS – MATHEMATICS

MATH-Prior Season							
Cut Scores and Percentiles for each State Performance Level							
Grade	Well Below	Below		Met		Exceeds	
	Cut Score	Cut Score	Perce- tile	Cut Score	Perce- tile	Cut Score	Perce- tile
2	<170	170	20	177	45	188	80
3	<182	182	21	191	46	202	81
4	<197	197	31	204	53	215	84
5	<205	205	31	214	58	226	85
6	<212	212	33	222	59	236	89
7	<217	217	32	227	56	240	84
8	<224	224	36	233	57	249	89
10	<234	234	45	247	74	259	92

* Note: the cut scores shown in this table are the **minimum** estimated scores. Meeting the minimum MAP cut score corresponds to a 50% probability of achieving that performance level. Use the probabilities in Tables 7-12 to determine the appropriate ‘target’ scores for a desired level of certainty. Italics represent extrapolated data.

TABLE 4 – MINIMUM ESTIMATED PRIOR-SEASON (FALL) RIT CUT SCORES CORRESPONDING TO STATE PERFORMANCE LEVELS – READING

READING-Prior Season							
Cut Scores and Percentiles for each State Performance Level							
Grade	Well Below	Below		Met		Exceeds	
	Cut Score	Cut Score	Perce- tile	Cut Score	Perce- tile	Cut Score	Perce- tile
2	<162	162	9	172	32	186	69
3	<173	173	9	185	32	199	70
4	<180	180	8	197	39	211	79
5	<190	190	12	204	39	213	67
6	<197	197	14	211	45	225	85
7	<202	202	16	216	49	224	73
8	<206	206	16	217	41	226	68
10	<203	203	9	216	26	229	61

* Note: the cut scores shown in this table are the **minimum** estimated scores. Meeting the minimum MAP cut score corresponds to a 50% probability of achieving that performance level. Use the probabilities in Tables 7-12 to determine the appropriate ‘target’ scores for a desired level of certainty. Italics represent extrapolated data.

TABLE 5 – MINIMUM ESTIMATED CURRENT-SEASON (SPRING) RIT CUT SCORES
CORRESPONDING TO STATE PERFORMANCE LEVELS – SCIENCE

GENERAL SCIENCE-Current Season							
Cut Scores and Percentiles for each State Performance Level							
Grade	Well Below	Below		Met		Exceeds	
	Cut Score	Cut Score	Perce- tile	Cut Score	Perce- tile	Cut Score	Perce- tile
2							
3	<189	189	25	199	63	209	91
4	<194	194	26	204	63	214	90
5	<198	198	24	209	63	218	90
6	<197	197	19	209	57	218	85
7	<199	199	19	212	57	221	84
8	<206	206	18	215	42	225	78

* Note: the cut scores shown in this table are the **minimum** estimated scores. Meeting the minimum MAP cut score corresponds to a 50% probability of achieving that performance level. Use the probabilities in Tables 7-12 to determine the appropriate 'target' scores for a desired level of certainty. Italics represent extrapolated data.

TABLE 6 – MINIMUM ESTIMATED PRIOR-SEASON (FALL) RIT CUT SCORES CORRESPONDING
TO STATE PERFORMANCE LEVELS – SCIENCE

GENERAL SCIENCE-Prior Season							
Cut Scores and Percentiles for each State Performance Level							
Grade	Well Below	Below		Met		Exceeds	
	Cut Score	Cut Score	Perce- tile	Cut Score	Perce- tile	Cut Score	Perce- tile
2							
3	<184	184	25	193	62	203	90
4	<189	189	25	200	65	209	90
5	<193	193	23	205	65	218	89
6	<195	195	20	206	56	216	86
7	<198	198	20	210	58	218	83
8	<200	200	19	209	44	220	79

* Note: the cut scores shown in this table are the **minimum** estimated scores. Meeting the minimum MAP cut score corresponds to a 50% probability of achieving that performance level. Use the probabilities in Tables 7-12 to determine the appropriate 'target' scores for a desired level of certainty. Italics represent extrapolated data.

TABLE 7 –ESTIMATED PROBABILITY OF SCORING AS PROFICIENT OR HIGHER ON THE STATE MATHEMATICS TEST IN SAME SEASON (SPRING), BY STUDENT GRADE AND RIT SCORE RANGE ON MAP MATHEMATICS

MATH-Current Season								
Estimated Probability of Passing State Test Based on Observed MAP Score								
RIT Range	2	3	4	5	6	7	8	10
120	0%	0%	0%	0%	0%	0%	0%	0%
125	0%	0%	0%	0%	0%	0%	0%	0%
130	0%	0%	0%	0%	0%	0%	0%	0%
135	0%	0%	0%	0%	0%	0%	0%	0%
140	1%	0%	0%	0%	0%	0%	0%	0%
145	1%	0%	0%	0%	0%	0%	0%	0%
150	2%	1%	0%	0%	0%	0%	0%	0%
155	3%	1%	0%	0%	0%	0%	0%	0%
160	5%	2%	1%	0%	0%	0%	0%	0%
165	8%	3%	1%	0%	0%	0%	0%	0%
170	13%	4%	1%	1%	0%	0%	0%	0%
175	20%	7%	2%	1%	0%	0%	0%	0%
180	29%	11%	4%	1%	1%	1%	0%	0%
185	40%	17%	6%	2%	1%	1%	1%	0%
190	52%	25%	10%	4%	2%	2%	1%	0%
195	65%	35%	15%	6%	4%	3%	1%	0%
200	75%	48%	23%	10%	6%	4%	2%	1%
205	83%	60%	33%	15%	9%	7%	4%	1%
210	89%	71%	45%	23%	14%	11%	6%	2%
215	93%	80%	57%	33%	21%	17%	10%	3%
220	96%	87%	69%	45%	31%	25%	15%	5%
225	97%	92%	79%	57%	43%	35%	23%	8%
230	98%	95%	86%	69%	55%	48%	33%	13%
235	99%	97%	91%	79%	67%	60%	45%	20%
240	99%	98%	94%	86%	77%	71%	57%	29%
245	100%	99%	96%	91%	85%	80%	69%	40%
250	100%	99%	98%	94%	90%	87%	79%	52%
255	100%	100%	99%	96%	94%	92%	86%	65%
260	100%	100%	99%	98%	96%	95%	91%	75%
265	100%	100%	100%	99%	98%	97%	94%	83%
270	100%	100%	100%	99%	99%	98%	96%	89%
275	100%	100%	100%	100%	99%	99%	98%	93%
280	100%	100%	100%	100%	99%	99%	99%	96%
285	100%	100%	100%	100%	100%	100%	99%	97%
290	100%	100%	100%	100%	100%	100%	100%	98%
295	100%	100%	100%	100%	100%	100%	100%	99%
300	100%	100%	100%	100%	100%	100%	100%	99%

*Note: This table provides the estimated probability of passing the state test based on a MAP test score taken during that same (spring) season. Example: if a fifth grade student scored 200 on a MAP test taken during the spring season, her/his estimated probability of passing the state test is 10%.

Italics represent extrapolated data.

TABLE 8 –ESTIMATED PROBABILITY OF SCORING AS PROFICIENT OR HIGHER ON THE STATE READING TEST IN SAME SEASON (SPRING), BY STUDENT GRADE AND RIT SCORE RANGE ON MAP READING

READING-Current Season								
Estimated Probability of Passing State Test Based on Observed MAP Score								
RIT Range	2	3	4	5	6	7	8	10
120	0%	0%	0%	0%	0%	0%	0%	0%
125	0%	0%	0%	0%	0%	0%	0%	0%
130	0%	0%	0%	0%	0%	0%	0%	0%
135	1%	0%	0%	0%	0%	0%	0%	0%
140	1%	0%	0%	0%	0%	0%	0%	0%
145	2%	1%	0%	0%	0%	0%	0%	0%
150	4%	1%	0%	0%	0%	0%	0%	0%
155	6%	2%	1%	0%	0%	0%	0%	0%
160	9%	4%	1%	1%	0%	0%	0%	0%
165	14%	6%	2%	1%	1%	0%	0%	1%
170	21%	9%	4%	2%	1%	1%	1%	1%
175	31%	14%	6%	4%	2%	1%	1%	1%
180	43%	21%	9%	6%	3%	2%	2%	2%
185	55%	31%	14%	9%	5%	4%	3%	4%
190	67%	43%	21%	14%	8%	6%	5%	6%
195	77%	55%	31%	21%	13%	9%	8%	10%
200	85%	67%	43%	31%	20%	14%	13%	15%
205	90%	77%	55%	43%	29%	21%	20%	23%
210	94%	85%	67%	55%	40%	31%	29%	33%
215	96%	90%	77%	67%	52%	43%	40%	45%
220	98%	94%	85%	77%	65%	55%	52%	57%
225	99%	96%	90%	85%	75%	67%	65%	69%
230	99%	98%	94%	90%	83%	77%	75%	79%
235	99%	99%	96%	94%	89%	85%	83%	86%
240	100%	99%	98%	96%	93%	90%	89%	91%
245	100%	99%	99%	98%	96%	94%	93%	94%
250	100%	100%	99%	99%	97%	96%	96%	96%
255	100%	100%	99%	99%	98%	98%	97%	98%
260	100%	100%	100%	99%	99%	99%	98%	99%
265	100%	100%	100%	100%	99%	99%	99%	99%
270	100%	100%	100%	100%	100%	99%	99%	100%
275	100%	100%	100%	100%	100%	100%	100%	100%
280	100%	100%	100%	100%	100%	100%	100%	100%
285	100%	100%	100%	100%	100%	100%	100%	100%
290	100%	100%	100%	100%	100%	100%	100%	100%
295	100%	100%	100%	100%	100%	100%	100%	100%
300	100%	100%	100%	100%	100%	100%	100%	100%

* Note: This table provides the estimated probability of passing the state test based on a MAP test score taken during that same (spring) season. Example: if a fifth grade student scored 200 on a MAP test taken during the spring season, her/his estimated probability of passing the state test is 31%.

Italics represent extrapolated data.

TABLE 9 –ESTIMATED PROBABILITY OF SCORING AS PROFICIENT OR HIGHER ON THE STATE MATHEMATICS TEST IN PRIOR SEASON (FALL), BY STUDENT GRADE AND RIT SCORE RANGE ON MAP MATHEMATICS

MATH-Prior Season								
Estimated Probability of Passing State Test Based on Observed MAP Score								
RIT Range	2	3	4	5	6	7	8	10
120	0%	0%	0%	0%	0%	0%	0%	0%
125	1%	0%	0%	0%	0%	0%	0%	0%
130	1%	0%	0%	0%	0%	0%	0%	0%
135	1%	0%	0%	0%	0%	0%	0%	0%
140	2%	1%	0%	0%	0%	0%	0%	0%
145	4%	1%	0%	0%	0%	0%	0%	0%
150	6%	2%	0%	0%	0%	0%	0%	0%
155	10%	3%	1%	0%	0%	0%	0%	0%
160	15%	4%	1%	0%	0%	0%	0%	0%
165	23%	7%	2%	1%	0%	0%	0%	0%
170	33%	11%	3%	1%	1%	0%	0%	0%
175	45%	17%	5%	2%	1%	1%	0%	0%
180	57%	25%	8%	3%	1%	1%	0%	0%
185	69%	35%	13%	5%	2%	1%	1%	0%
190	79%	48%	20%	8%	4%	2%	1%	0%
195	86%	60%	29%	13%	6%	4%	2%	1%
200	91%	71%	40%	20%	10%	6%	4%	1%
205	94%	80%	52%	29%	15%	10%	6%	1%
210	96%	87%	65%	40%	23%	15%	9%	2%
215	98%	92%	75%	52%	33%	23%	14%	4%
220	99%	95%	83%	65%	45%	33%	21%	6%
225	99%	97%	89%	75%	57%	45%	31%	10%
230	100%	98%	93%	83%	69%	57%	43%	15%
235	100%	99%	96%	89%	79%	69%	55%	23%
240	100%	99%	97%	93%	86%	79%	67%	33%
245	100%	100%	98%	96%	91%	86%	77%	45%
250	100%	100%	99%	97%	94%	91%	85%	57%
255	100%	100%	99%	98%	96%	94%	90%	69%
260	100%	100%	100%	99%	98%	96%	94%	79%
265	100%	100%	100%	99%	99%	98%	96%	86%
270	100%	100%	100%	100%	99%	99%	98%	91%
275	100%	100%	100%	100%	100%	99%	99%	94%
280	100%	100%	100%	100%	100%	100%	99%	96%
285	100%	100%	100%	100%	100%	100%	99%	98%
290	100%	100%	100%	100%	100%	100%	100%	99%
295	100%	100%	100%	100%	100%	100%	100%	99%
300	100%	100%	100%	100%	100%	100%	100%	100%

* Note: This table provides the estimated probability of passing the state test based on a MAP test score taken during that prior (fall) season. Example: if a fifth grade student scored 200 on a MAP test taken during the fall season, her/his estimated probability of passing the state test is 20%.

Italics represent extrapolated data.

TABLE 10 –ESTIMATED PROBABILITY OF SCORING AS PROFICIENT OR HIGHER ON THE STATE READING TEST IN PRIOR SEASON (FALL), BY STUDENT GRADE AND RIT SCORE RANGE ON MAP READING

READING-Prior Season								
Estimated Probability of Passing State Test Based on Observed MAP Score								
RIT Range	2	3	4	5	6	7	8	10
120	1%	0%	0%	0%	0%	0%	0%	0%
125	1%	0%	0%	0%	0%	0%	0%	0%
130	1%	0%	0%	0%	0%	0%	0%	0%
135	2%	1%	0%	0%	0%	0%	0%	0%
140	4%	1%	0%	0%	0%	0%	0%	0%
145	6%	2%	1%	0%	0%	0%	0%	0%
150	10%	3%	1%	0%	0%	0%	0%	0%
155	15%	5%	1%	1%	0%	0%	0%	0%
160	23%	8%	2%	1%	1%	0%	0%	0%
165	33%	12%	4%	2%	1%	1%	1%	1%
170	45%	18%	6%	3%	2%	1%	1%	1%
175	57%	27%	10%	5%	3%	2%	1%	2%
180	69%	38%	15%	8%	4%	3%	2%	3%
185	79%	50%	23%	13%	7%	4%	4%	4%
190	86%	62%	33%	20%	11%	7%	6%	7%
195	91%	73%	45%	29%	17%	11%	10%	11%
200	94%	82%	57%	40%	25%	17%	15%	17%
205	96%	88%	69%	52%	35%	25%	23%	25%
210	98%	92%	79%	65%	48%	35%	33%	35%
215	99%	95%	86%	75%	60%	48%	45%	48%
220	99%	97%	91%	83%	71%	60%	57%	60%
225	100%	98%	94%	89%	80%	71%	69%	71%
230	100%	99%	96%	93%	87%	80%	79%	80%
235	100%	99%	98%	96%	92%	87%	86%	87%
240	100%	100%	99%	97%	95%	92%	91%	92%
245	100%	100%	99%	98%	97%	95%	94%	95%
250	100%	100%	100%	99%	98%	97%	96%	97%
255	100%	100%	100%	99%	99%	98%	98%	98%
260	100%	100%	100%	100%	99%	99%	99%	99%
265	100%	100%	100%	100%	100%	99%	99%	99%
270	100%	100%	100%	100%	100%	100%	100%	100%
275	100%	100%	100%	100%	100%	100%	100%	100%
280	100%	100%	100%	100%	100%	100%	100%	100%
285	100%	100%	100%	100%	100%	100%	100%	100%
290	100%	100%	100%	100%	100%	100%	100%	100%
295	100%	100%	100%	100%	100%	100%	100%	100%
300	100%	100%	100%	100%	100%	100%	100%	100%

* Note: This table provides the estimated probability of passing the state test based on a MAP test score taken during the prior (fall) season. Example: if a fifth grade student scored 200 on a MAP test taken during the fall season, her/his estimated probability of passing the state test is 40%.

Italics represent extrapolated data.

TABLE 11 –ESTIMATED PROBABILITY OF SCORING AS PROFICIENT OR HIGHER ON THE STATE SCIENCE TEST IN CURRENT SEASON (SPRING), BY STUDENT GRADE AND RIT SCORE RANGE ON MAP READING

SCIENCE-Current Season						
Estimated Probability of Passing State Test Based on Observed MAP Score						
RIT Range	3	4	5	6	7	8
120	0%	0%	0%	0%	0%	0%
125	0%	0%	0%	0%	0%	0%
130	0%	0%	0%	0%	0%	0%
135	0%	0%	0%	0%	0%	0%
140	0%	0%	0%	0%	0%	0%
145	0%	0%	0%	0%	0%	0%
150	1%	0%	0%	0%	0%	0%
155	1%	1%	0%	0%	0%	0%
160	2%	1%	1%	1%	1%	0%
165	3%	2%	1%	1%	1%	1%
170	5%	3%	2%	2%	1%	1%
175	8%	5%	3%	3%	2%	2%
180	13%	8%	5%	5%	4%	3%
185	20%	13%	8%	8%	6%	5%
190	29%	20%	13%	13%	10%	8%
195	40%	29%	20%	20%	15%	12%
200	52%	40%	29%	29%	23%	18%
205	65%	52%	40%	40%	33%	27%
210	75%	65%	52%	52%	45%	38%
215	83%	75%	65%	65%	57%	50%
220	89%	83%	75%	75%	69%	62%
225	93%	89%	83%	83%	79%	73%
230	96%	93%	89%	89%	86%	82%
235	97%	96%	93%	93%	91%	88%
240	98%	97%	96%	96%	94%	92%
245	99%	98%	97%	97%	96%	95%
250	99%	99%	98%	98%	98%	97%
255	100%	99%	99%	99%	99%	98%
260	100%	100%	99%	99%	99%	99%
265	100%	100%	100%	100%	100%	99%
270	100%	100%	100%	100%	100%	100%
275	100%	100%	100%	100%	100%	100%
280	100%	100%	100%	100%	100%	100%
285	100%	100%	100%	100%	100%	100%
290	100%	100%	100%	100%	100%	100%
295	100%	100%	100%	100%	100%	100%
300	100%	100%	100%	100%	100%	100%

* Note: This table provides the estimated probability of passing the state test based on a MAP test score taken during the current (spring) season. Example: if a fifth grade student scored 200 on a MAP test taken during the spring season, her/his estimated probability of passing the state test is 29%.

Italics represent extrapolated data.

TABLE 12 –ESTIMATED PROBABILITY OF SCORING AS PROFICIENT OR HIGHER ON THE STATE SCIENCE TEST IN THE PRIOR SEASON (FALL), BY STUDENT GRADE AND RIT SCORE RANGE ON MAP READING

SCIENCE-Prior Season						
Estimated Probability of Passing State Test Based on Observed MAP Score						
RIT Range	3	4	5	6	7	8
120	0%	0%	0%	0%	0%	0%
125	0%	0%	0%	0%	0%	0%
130	0%	0%	0%	0%	0%	0%
135	0%	0%	0%	0%	0%	0%
140	0%	0%	0%	0%	0%	0%
145	1%	0%	0%	0%	0%	0%
150	1%	1%	0%	0%	0%	0%
155	2%	1%	1%	1%	0%	0%
160	4%	2%	1%	1%	1%	1%
165	6%	3%	2%	2%	1%	1%
170	9%	5%	3%	3%	2%	2%
175	14%	8%	5%	4%	3%	3%
180	21%	12%	8%	7%	5%	5%
185	31%	18%	12%	11%	8%	8%
190	43%	27%	18%	17%	12%	13%
195	55%	38%	27%	25%	18%	20%
200	67%	50%	38%	35%	27%	29%
205	77%	62%	50%	48%	38%	40%
210	85%	73%	62%	60%	50%	52%
215	90%	82%	73%	71%	62%	65%
220	94%	88%	82%	80%	73%	75%
225	96%	92%	88%	87%	82%	83%
230	98%	95%	92%	92%	88%	89%
235	99%	97%	95%	95%	92%	93%
240	99%	98%	97%	97%	95%	96%
245	99%	99%	98%	98%	97%	97%
250	100%	99%	99%	99%	98%	98%
255	100%	100%	99%	99%	99%	99%
260	100%	100%	100%	100%	99%	99%
265	100%	100%	100%	100%	100%	100%
270	100%	100%	100%	100%	100%	100%
275	100%	100%	100%	100%	100%	100%
280	100%	100%	100%	100%	100%	100%
285	100%	100%	100%	100%	100%	100%
290	100%	100%	100%	100%	100%	100%
295	100%	100%	100%	100%	100%	100%
300	100%	100%	100%	100%	100%	100%

* Note: This table provides the estimated probability of passing the state test based on a MAP test score taken during the prior (fall) season. Example: if a fifth grade student scored 200 on a MAP test taken during the fall season, her/his estimated probability of passing the state test is 38%.

Italics represent extrapolated data.

TABLE 13 – CORRELATION COEFFICIENTS BETWEEN MAP AND STATE TEST FOR EACH GRADE AND TEST SUBJECT

Grade	Math Correlation Pearson's <i>r</i>	Reading Correlation Pearson's <i>r</i>	Science Correlation Pearson's <i>r</i>
3	0.788	0.781	
4	0.837	0.783	
5	0.843	0.774	0.758
6	0.861	0.774	
7	0.848	0.767	
8	0.845	0.725	0.786
10	0.770	0.733	

* Note: Correlations range from 0 (indicating no correlation between the state test score and the NWEA test score) to 1 (indicating complete correlation between the state test score and the NWEA test score).

TABLE 14 – PERCENTAGE OF STUDENTS WHOSE PASS STATUS WAS ACCURATELY PREDICTED BY THEIR MAP PERFORMANCE USING REPORTED CUT SCORES

Grade	Sample Size	MAP Accurately Predicted State Performance	MAP Underestimated State Performance	MAP Overestimated State Performance
Mathematics				
3	9137	83.0%	8.9%	8.1%
4	9461	83.6%	8.2%	8.1%
5	9118	84.9%	8.0%	7.1%
6	8978	84.8%	8.2%	7.1%
7	8731	86.0%	7.6%	6.5%
8	8026	84.5%	7.5%	8.0%
10	2784	73.0%	8.3%	6.9%
Reading				
3	8826	84.7%	8.0%	7.3%
4	9002	83.2%	8.7%	8.1%
5	8596	83.6%	8.7%	7.7%
6	8179	80.8%	9.3%	9.9%
7	7980	80.9%	9.8%	9.3%
8	7896	81.8%	9.5%	8.8%
10	2718	82.0%	9.6%	8.4%
Science				
5	1125	75.5%	13.1%	11.5%
8	945	81.5%	9.9%	8.6%

* Note: The third column of this table shows the percentage of students whose Pass/NotPass status was predicted accurately when their state test score was linked to their MAP score based on this linking study. The fourth column shows the percentage of students whose MAP score predicted they would not pass the state benchmark but they did pass. The last column shows the percentage of students whose MAP score predicted they would pass the state benchmark but they did not pass. Due to rounding, percentages may not add to 100%.