

A Study of the Alignment of the NWEA RIT Scale with the Washington Assessment System

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Recently, NWEA completed a project to connect the scale of the tests used for Washington mathematics and reading assessments with NWEA's RIT scale. Information from the Washington 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 aggregate state test results with NWEA test results for all schools whose NWEA test count for a grade and subject was between 95% and 105% of the count tested on the state assessment. This provided assurance that only schools that had tested a very similar population on both tests were included.

The Washington state test is administered in spring. For the spring season, an equipercentile method was used to estimate the RIT score equivalent to each state performance level. For spring, 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.

More complete documentation about this method can be found on our website.

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

Tables 7 through 12 show the proportion of students achieving various RIT score ranges whom we estimate would achieve a proficient score on the state assessment. These tables can be used to assist in identifying students who are not likely to pass these assessments, thereby increasing the probability that intervention strategies will be planned and implemented.

Table 1 – Recommended same-season (spring) RIT cut scores for Washington performance levels - Reading

Grade	Well Below Standard		Below Standard		Meets Standard		Above Standard	
	Cut score	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	
3	<179	179	11	195	37	207	73	
4	<175	175	4	196	23	213	71	
5	<189	189	7	204	27	217	67	
6	<195	195	9	213	40	229	85	
7	<199	199	10	219	49	228	75	
8	<203	203	10	218	36	231	74	
9	<201	201	7	217	27	229	60	
10	<195	195	4	214	18	226	45	

Note: bolded, italicized text denotes extrapolated cut scores

Table 2 – Recommended same-season (spring) RIT cut scores for Washington performance levels – Mathematics

Grade	Well Below Standard		Below Standard		Meets Standard		Above Standard	
	Cut score	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	
3	<189	189	15	198	36	210	77	
4	<201	201	23	209	46	220	77	
5	<208	208	24	218	48	230	79	
6	<215	215	29	227	57	238	82	
7	<223	223	36	233	59	245	83	
8	<226	226	32	237	56	251	84	
9	<228	228	28	241	241	254	83	
10	<229	229	24	243	52	256	83	

Note: bolded, italicized text denotes extrapolated cut scores

Table 3 – Recommended same-season (spring) RIT cut scores for Washington performance levels – General Science

Grade	Well Below Standard		Below Standard		Meets Standard		Above Standard	
	Cut score	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	
3	<i><193</i>	<i>193</i>	<i>30</i>	<i>203</i>	<i>73</i>	<i>214</i>	<i>98</i>	
4	<i><198</i>	<i>198</i>	<i>30</i>	<i>208</i>	<i>73</i>	<i>219</i>	<i>98</i>	
5	<201	201	30	211	73	224	98	
6	<i><205</i>	<i>205</i>	<i>30</i>	<i>214</i>	<i>68</i>	<i>224</i>	<i>95</i>	
7	<i><207</i>	<i>207</i>	<i>30</i>	<i>215</i>	<i>63</i>	<i>224</i>	<i>91</i>	
8	<210	210	30	217	57	226	88	
9	<i><212</i>	<i>212</i>	<i>21</i>	<i>218</i>	<i>41</i>	<i>230</i>	<i>87</i>	
10	<207	207	11	213	25	229	85	

Note: bolded, *italicized text denotes extrapolated cut scores*

Table 4 – Recommended prior-season (fall) RIT cut scores for Washington performance levels - Reading

Grade	Well Below Standard		Below Standard		Meets Standard		Above Standard	
	Cut score	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	
3	<171	171	11	187	38	200	73	
4	<169	169	4	190	24	208	73	
5	<183	183	7	199	27	213	68	
6	<191	191	9	209	40	225	85	
7	<196	196	10	216	49	225	76	
8	<200	200	10	215	36	228	75	
9	<i><198</i>	<i>198</i>	<i>7</i>	<i>214</i>	<i>27</i>	<i>226</i>	<i>61</i>	
10	<195	195	4	213	18	225	46	

Note: bolded, *italicized text denotes extrapolated cut scores*

Table 5 – Recommended prior-season (fall) RIT cut scores for Washington performance levels – Mathematics

Grade	Well Below Standard		Below Standard		Meets Standard		Above Standard	
	Cut score	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	
3	<180	180	15	189	38	201	77	
4	<195	195	24	202	46	211	77	
5	<203	203	26	211	50	222	80	
6	<210	210	29	221	58	231	83	
7	<219	219	37	228	59	238	83	
8	<222	222	32	233	58	245	84	
9	<223	223	28	236	54	248	83	
10	<226	226	24	239	52	253	84	

Note: bolded, *italicized text denotes extrapolated cut scores*

Table 6 – Recommended prior-season (fall) RIT cut scores for Washington performance levels – General Science

Grade	Well Below Standard		Below Standard		Meets Standard		Above Standard	
	Cut score	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	
3	<187	187	31	198	76	212	99	
4	<193	193	31	204	76	218	99	
5	<197	197	31	208	76	220	98	
6	<199	199	31	210	73	221	96	
7	<202	202	30	212	66	221	90	
8	<205	205	30	213	60	222	89	
9	<206	206	20	213	42	226	87	
10	<206	206	11	213	27	228	86	

Note: bolded, *italicized text denotes extrapolated cut scores*

Table 7 – Proportion of students passing the Washington state reading assessment based on same-season (spring) reading RIT range

RIT Range	Percent in this range who pass						
	3	4	5	6	7	8	10
165	6%	5%	2%	1%	1%	1%	1%
170	9%	8%	4%	2%	1%	1%	1%
175	14%	13%	6%	3%	1%	2%	2%
180	22%	20%	10%	4%	2%	3%	4%
185	31%	29%	16%	7%	4%	4%	6%
190	43%	40%	23%	11%	6%	7%	10%
195	55%	52%	33%	17%	10%	11%	16%
200	67%	64%	45%	25%	16%	17%	23%
205	77%	75%	57%	36%	23%	25%	33%
210	84%	83%	69%	48%	33%	36%	45%
215	90%	89%	78%	60%	45%	48%	57%
220	94%	93%	86%	71%	57%	60%	69%
225	96%	96%	91%	80%	69%	71%	78%
230	98%	97%	94%	87%	78%	80%	86%
235	99%	98%	96%	92%	86%	87%	91%
240	99%	99%	98%	95%	91%	92%	94%
245	99%	99%	99%	97%	94%	95%	96%

Table 8 – Proportion of students passing the Washington state mathematics assessment based on same-season (spring) RIT range

RIT Range	Percent in this range who pass						
	3	4	5	6	7	8	10
170	7%	2%	1%	0%	0%	0%	0%
175	11%	4%	2%	1%	0%	0%	0%
180	17%	6%	3%	1%	1%	0%	0%
185	25%	10%	4%	2%	1%	1%	0%
190	36%	16%	7%	3%	2%	1%	1%
195	48%	23%	11%	5%	3%	2%	1%
200	60%	33%	17%	8%	4%	3%	2%
205	71%	45%	25%	12%	7%	5%	3%
210	80%	57%	36%	18%	11%	8%	4%
215	87%	69%	48%	27%	17%	12%	7%
220	92%	78%	60%	38%	25%	18%	11%
225	95%	86%	71%	50%	36%	27%	17%
230	97%	91%	80%	62%	48%	38%	25%
235	98%	94%	87%	73%	60%	50%	36%
240	99%	96%	92%	82%	71%	62%	48%
245	99%	98%	95%	88%	80%	73%	60%
250	100%	99%	97%	92%	87%	82%	71%
255	100%	99%	98%	95%	92%	88%	80%
260	100%	99%	99%	97%	95%	92%	87%
265	100%	100%	99%	98%	97%	95%	92%
270	100%	100%	100%	99%	98%	97%	95%

Table 9 – Proportion of students passing the Washington state science assessment based on same-season (spring) science RIT range

RIT Range	Percent in this range who pass		
	5	8	10
180	5%	3%	4%
185	8%	5%	7%
190	13%	8%	11%
195	20%	12%	17%
200	29%	18%	25%
205	40%	27%	36%
210	52%	38%	48%
215	64%	50%	60%
220	75%	62%	71%
225	83%	73%	80%
230	89%	82%	87%
235	93%	88%	92%
240	96%	92%	95%

Table 10 – Proportion of students passing the Washington state reading assessment based on prior-season (fall) reading RIT range

RIT Range	Percent in this range who pass						
	3	4	5	6	7	8	10
155	5%	4%	1%	1%	0%	0%	0%
160	8%	6%	2%	1%	0%	1%	1%
165	12%	9%	4%	1%	1%	1%	1%
170	18%	14%	6%	2%	1%	1%	2%
175	27%	22%	10%	4%	2%	2%	3%
180	38%	31%	16%	6%	3%	4%	4%
185	50%	43%	23%	10%	5%	6%	7%
190	62%	55%	33%	16%	8%	9%	11%
195	73%	67%	45%	23%	13%	14%	17%
200	82%	77%	57%	33%	20%	22%	25%
205	88%	84%	69%	45%	29%	31%	36%
210	92%	90%	78%	57%	40%	43%	48%
215	95%	94%	86%	69%	52%	55%	60%
220	97%	96%	91%	78%	64%	67%	71%
225	98%	98%	94%	86%	75%	77%	80%
230	99%	99%	96%	91%	83%	84%	87%
235	99%	99%	98%	94%	89%	90%	92%
240	100%	99%	99%	96%	93%	94%	95%

Table 11 – Proportion of students passing the Washington state mathematics assessment based on prior-season (fall) RIT range

RIT Range	Percent in this range who pass						
	3	4	5	6	7	8	10
160	6%	2%	1%	0%	0%	0%	0%
165	10%	3%	1%	0%	0%	0%	0%
170	16%	5%	2%	1%	0%	0%	0%
175	23%	8%	3%	1%	1%	0%	0%
180	33%	12%	5%	2%	1%	1%	0%
185	45%	18%	8%	3%	2%	1%	1%
190	57%	27%	13%	5%	3%	2%	1%
195	69%	38%	20%	8%	4%	3%	1%
200	78%	50%	29%	13%	7%	4%	2%
205	86%	62%	40%	20%	11%	7%	4%
210	91%	73%	52%	29%	17%	11%	6%
215	94%	82%	64%	40%	25%	17%	10%
220	96%	88%	75%	52%	36%	25%	16%
225	98%	92%	83%	64%	48%	36%	23%
230	99%	95%	89%	75%	60%	48%	33%
235	99%	97%	93%	83%	71%	60%	45%
240	99%	98%	96%	89%	80%	71%	57%
245	100%	99%	97%	93%	87%	80%	69%
250	100%	99%	98%	96%	92%	87%	78%
255	100%	100%	99%	97%	95%	92%	86%
260	100%	100%	99%	98%	97%	95%	91%
265	100%	100%	100%	99%	98%	97%	94%
270	100%	100%	100%	99%	99%	98%	96%

Table 12 – Proportion of students passing the Washington state science assessment based on prior-season (fall) RIT range

RIT Range	Percent in this range who pass		
	5	8	10
180	7%	4%	4%
185	11%	7%	7%
190	17%	11%	11%
195	25%	17%	17%
200	36%	25%	25%
205	48%	36%	36%
210	60%	48%	48%
215	71%	60%	60%
220	80%	71%	71%
225	87%	80%	80%
230	92%	87%	87%
235	95%	92%	92%
240	97%	95%	95%